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THE

HARBOURS AND PORTS

OF

LAKE ONTARIO,

IN A SERIES OF CHARTS,

ACCOMPANIED BY A DESCRIPTION OF EACH

TOGETHER WITH THE LIGHTHOUSES HARBOUR LIGHTS, DEPTH OF WATER, COURSES AND DISTANCES &c. &c.

COMPILED FROM AUTHENTIC SOURCES, THE CHARTS OF CAPT OWEN AND LIEUT HERBERT FROM RECENT SURVEYS,

AS WELL AS

FROM PERSONAL OBSERVATIONS.

BY EDWARD M^{c} HOBDER, M.D.,

COMMODORE OF THE ROYAL [illegible] YACHT CLUB.

[illegible]

TORONTO

MACLEAR & CO. 17 KING STREET EAST

1857

PREFACE

In offering this little work to the public, at the earnest solicitation of several of the Captains of schooners navigating these waters, I have been actuated solely by a desire to supply a want which I have frequently heard lamented by all those with whom I have conversed on the subject.

Fully aware of the many deficiencies and imperfections which must attach to it, yet I venture on its publication confident in its general correctness.

The materials I have derived from such authentic sources as have been within my reach from the Admiralty Chart of Captain Owen R N corrected to 1861, from surveys by the Corps of Topographical Engineers of the United States, and from information obtained from some of the oldest and most experienced Steersmen on the Lake And here let me express my warmest thanks to Captain Carr of the *Maple Leaf* Captain Young of the *Chief Justice*, Captain W Bate of the Schooner *Water Witch*, and others, who have most kindly seconded my efforts by giving me every information in their power

I have myself visited every Port, with the exception of Sackett's Harbour and Port Ontario, and have sketched the entrances to them, taken their compass bearings, soundings, &c &c; but from the want of the time requisite, as well as a practical knowledge in the use of surveying instruments, the charts must be looked upon only in the light of mere sketches, not drawn to any definite or particular scale

The distances from port to port may appear great when compared with those which have commonly been acknowledged as correct I have, however carefully taken them from Captain Owen's Survey and preferred giving them as by him laid down

I shall consider myself most happy if my humble attempt should stimulate some abler hand than mine to improve upon and complete a task which I am well aware I have only commenced and it will gratify me still more, if through any effort of mine a single life is saved, or the smallest craft that navigates this noble Lake is preserved from wreck

DEDICATION.

For the Members of the Royal Canadian Yacht Club this little work has been compiled and to them it is dedicated in the hope that it may not only interest, but also excite and encourage in them a taste for that invigorating, truly British pastime and manly sport, Yachting, and make it a rival in their affections to the glorious game of Cricket, the Hunt, or the Gun: to the love and encouragement of these, may not Old England mainly attribute the courage and daring, the athletic frames, and hardiness of her sons? for let it not be forgotten that the effeminacy of a people is the surest forerunner of the decay of a nation.

May it also be useful to them by giving such sure and accurate information relative to the various Harbours and Ports on Lake Ontario, as may create in them a confidence in sailing, from the certainty that in any weather they can speedily reach some haven of refuge where their gallant little Barks may in shelter and in safety ride out the fiercest storm.

By their sincere Friend,

THE AUTHOR.

Toronto, April, 1847

HARBOURS AND PORTS.

NOTICE.—The depth of water given in the various Ports is the mean or average depth taken in the month of August at the opening of the navigation in the spring, when the Lake level is higher this average will be exceeded by about ten to fifteen inches; in the autumn before the rainy season sets in, it will be decreased from one to twelve inches.

TORONTO HARBOUR, OR BAY

The spacious anchorage is without doubt the best natural harbour on Lake Ontario. It is nearly circular, being formed by the main land on the north, and by a long, low and narrow spit of sand on the east, south, and south-west, called the Peninsular or Island. It extends in a south-westerly direction from the highlands in the township of Scarboro' and terminates in a point which suddenly turns to the north opposite the Old Garrison, and upon which trees of stunted growth are thickly scattered; thus is enclosed a beautiful basin of about two and a half miles in diameter capable of containing a great number of vessels.

LIGHTHOUSE.

The south-west extremity of the island is called Gibraltar Point, on which is erected the Lighthouse, 60 feet high, having a fixed bright light.

CHANNEL.

The entrance to the harbour is by a narrow channel at its north-west corner between the Queen's Wharf and a row of buoys south thereof which are placed in about ten feet water. The present channel is 300 feet wide, and about 600 or 700 feet long, having an average depth of 11 feet; but owing to the extreme narrowness of this passage, large and heavy laden vessels often find it difficult, sometimes impossible to beat in or out against a head wind.

The channel, however, is being widened from year to year by the constant use of the dredge; and I have great confidence that the attention of the Harbour Master to continue this useful work until a clear available space of 400 feet has been obtained.

HARBOUR LIGHTS.

On the Queen's Wharf are placed the Harbour Lights—the northernmost a fixed red light, the other a bright bronze light on the western extremity of the pier. These lights when brought into line indicate the entrance to the channel. They bear N. by W. of the lighthouse on Gibraltar Point.

In working up the Lake from the eastward at night, give the shore a good two-mile berth when abreast of the Scarboro lights, otherwise the light on Gibraltar Point will be hidden by the trees on the Island. If bound into Toronto Harbour keep nearly a mile to the W of the lighthouse then steer N for the harbour lights. In the spring and fall, fogs are prevalent, which hang near the surface, and do not ascend more than thirty or forty feet from the water: the harbour lights then, will not be seen, in which case, when well to the westward of the lighthouse on the Point, steer for the North Star immediately under which will be found the red light on the wharf.

When the fogs are so dense as to obscure all the lights or other land marks, the only safe guide is the lead line, and the shore should not be approached where there is less than six or seven fathoms water.

SHOAL.

A sandy shoal stretches into the Lake for a quarter of a mile in a S. W. direction off Gibraltar Point, and is thence continued along the W. side of the Island extending N. to the Ram Pasture which marks the channel into the bay at an average distance of a-quarter of a mile from the Island.

Vessels running for shelter from an easterly gale should anchor on the W. side of the Island about one mile from the shore, where there is good holding ground in six or seven fathoms water, sand and clay bottom: if too near the Island the anchor will not hold in the sand, and a sudden shift of wind will put them ashore on the bar.

DANGER.

There is a large boulder stone within five feet of the surface, nearly midway between the Queen's and Garrison Wharves, and a little to the south thereof.

REMARKS.

Much having of late been said regarding the advantages which Navigation, Commerce, and the City generally would derive from an eastern entrance to the Bay, I cannot allow the present opportunity to pass without raising my voice loudly against a measure, which if carried out in effect, must be followed by the most disastrous consequences to the best natural harbour on Lake Ontario.

The authors of the late reports on "The Improvement and Preservation of the Toronto Harbour"—to whom prizes were awarded on May 1854, by the Harbour Commissioners—are unanimous in condemning not only as useless but as highly prejudicial a canal through the land on the south eastern portion of the Peninsula. If the integrity of the Island is maintained, there is not the slightest fear of the present channel ever closing, even if left entirely alone. It may become narrower but it would never become so completely blocked up as to convert the present bay into a small lake or pond: natural causes are at work to prevent it. During the eight months of the year that the Bay is clear of ice, the amount of water taken from its surface by evaporation alone is enormous: experiments prove incontestably that three-fourths at least of each day's average is allow for loss from this cause alone. Let us assume, however that only half an inch takes place. What will be the result? From the 1st of April to the 30th of November we have 244 days. This divided by 2, gives 122 inches, or 10 feet 2 inches, the quantity of water taken from the surface of the bay during the above-named period. Again, taking the soundings of the Bay from the water's edge to its deepest part, we find that ten feet would be a

four average depth; thus we perceive that there is actually more water removed by evaporation than the Bay is capable of containing at any one time. How then is this loss supplied? By an under-current of cold water constantly rushing into the Bay from the Lake, between the end of the Queen's Wharf and the bar buoys. This is clearly proved, both by experiment and by resorting to the same means which put me in possession of the fact. I have dived at least an hundred times from a boat moored in the channel near the buoys, and when at the bottom, with my eyes open, I have *invariably* seen myself drawn inwards towards the Bay, nor can I call to mind a single instance where the under-current set outwards or in the opposite direction.

I am well aware that the surface or upper current will often run out of the Bay while the under current is running in, for this I have seen a minute after coming to the top of the water; neither will I deny that occasionally just after an easterly or south-easterly gale, when the waters of the Lake are driven up towards its head, and when the Bay in common with the Lake partakes of this rise, or after a strong S. W. blow which produces the same effect, that the under-current may be overcome by the pressure of the increased quantity of water in the Bay, and that a reflux current may for a short time be established.

The form or shape of the bar immediately opposite the Queen's Wharf also proves the steady undraft into the Bay. I have always likened it to a man's foot; the shoal which runs from the N. point of the Island, turns inwards suddenly near the spot where the red buoy is usually placed, this I have compared to the heel; the northern end of the bar runs parallel with the wharf and represents the sole of the foot, and the many sandy prolongations which run easterly may be likened to the toes.

To this natural cause, and to this alone, the permanence of the channel at the Queen's Wharf is dependant; do away with this current or lessen its force by another opening at the east end of the Bay, and in few years time the sand would gain such a mastery as to bid defiance to the dredge.

There are many other weighty reasons against making a canal at the S. E. end of the Bay; they are, however, so ably set forth in Captain Richardson's admirable report, that it is quite unnecessary for me to allude to them.

Might it not be desirable to build a short piece of crib work, say two or three hundred feet long, parallel with the Queen's Wharf, and at what ever distance from it to the south that the Harbour Commissioners may deem sufficient for the width of the channel, and upon the ends of which lights should be erected?

This piece would not in any way interfere with the escape of ice in the spring; it would clearly indicate the width of the channel, and for which purpose the present buoys are perfectly inadequate at night, and it would not have any injurious effect in causing the sand brought in by the wash of the S. W. wind from being deposited in any other situation than that in which it now takes place.

Should this suggestion not be deemed worthy of the consideration of the Harbour Commissioners, they should in common justice to all sailing vessels (more especially strangers) visiting this port, cause to be placed at the narrowest part of the channel south of the Queen's Wharf either a small beacon light (which might be lighted with gas), or a buoy fitted with bells, and which the action of the water alone would be sufficient to sound.

COURSES AND DISTANCES FROM GIBRALTAR POINT

Taken from the Admiralty Chart surveyed by Capt. Owen, R.N.

From Toronto to Burlington Canal (Hamilton) S. W. 35 miles.
" " Port Dalhousie S. by E. 38 miles.
" " Mouth of Niagara River S. E. by S. 35 miles.
(When on the bar being the Fort Niagara to bear S. E. by E.)
" " Devil's Nose E. by S. 36 miles.
" " Genesee River (Rochester) to clear Braddock's Point, E. by S. ¼ E. 110 miles.
" " Oswego, E. ¼ S. 170 miles.
" " Long Point Light, E. ¼ N. 136 miles.
" " Cobourg E. N. E. ¼ E. 76 miles.
" " Whitby N. E. by E. 34 miles.

No variation to be allowed for compass when within 20 m. E. or W. of Toronto.

THE PORT OF LIVERPOOL, OR PICKERING,

FORMERLY CALLED FRENCHMAN'S BAY

This Port is 26 miles N. E. ½ E. of Toronto. It is formed by a deep bay running into the land, and separated from the Lake by a sandy and gravelly beach, through which the Harbour Company have cut a Canal 180 feet wide.

HARBOUR LIGHT

On the east pier there is a low miserable lighthouse, the light from which cannot be seen five miles in the Lake.

The harbour itself is well sheltered, being completely land-locked, but from the foulness of the bottom (principally from weeds) no anchor will not hold during a hard blow

DEPTH OF WATER.

The average depth of water inside the bay is 9 feet 6 inches; at the outer mouth between the piers, 13 feet 6 inches; and at the inner mouth 7 feet 6 inches.

Through this canal a current runs in and out with great regularity once in about every four minutes.

WHITBY HARBOUR.

Six miles to the eastward of Liverpool and 34 miles N. E. by E. of Toronto, is the Harbour of Whitby one of the best and most secure on the north side of the Lake. It stands near the centre of a deep bay between Ruby Head on the E. and Scarboro' Heights on the West, and three and a half or four miles north of line drawn between these two points.

The harbour is formed by a strong breakwater of rip-rap or crib-work, stretching across the head of the bay by which it is separated from the Lake thus enclosing a spacious basin, the entrance to which is at its eastern extremity between ports running south a considerable distance into the Lake, 250 feet apart, and with 12 or 14 feet water in the channel

HARBOUR LIGHT

The lighthouse is 12 feet high built on the end of the west pier (which extends a little further into the Lake than the east,) having a fixed white light, badly seen in approaching from the E. or W but good from the southward

TIDE

A strong ede or current sets in and out of this harbour which at times is so strong as to turn a vessel's head round, when entering with a light wind

On entering the harbour blowing fresh from the S. S. E or S. W steer for the *Red Store House* keeping as close to it as safety will permit then luff your vessel sharply to the wind, back the topsails, to check her way and anchor as indicated in the chart.

DANGER.

Midway between Whitby and Liverpool there is a rocky shoal in shore, one mile W of the township line.

COURSES AND DISTANCES.

From Whitby to Toronto, S. W by W 34 miles
" " Burlington Canal S W ½ W 70 miles.
" " Port Dalhousie S S. W 55 miles
" " Rochester (clear of Braddock's Point) E. S E. ½ S 98 miles
" " Oswego, E by S 153 miles.
" " Long Point Light, E 107 miles.

OSHAWA

The Port of Oshawa is 6 miles E. of Whitby It is situated in the bend of a small bay and consists of a well constructed wharf, running out from the main land into 10 feet water

LIGHT

At the south end of the wharf there is a small store-house painted red and under the angle formed by the roof, is placed a large lamp which serves the purpose of a lighthouse.

The port is well secured from any wind north of E or W but badly exposed to the Southward of these points.

The west side of the bay of Oshawa is formed by a high clay bank almost perpendicular towards the Lake, on the extreme point of which stand three or four trees.

DANGER.

The E. point is called Oshawa Island bearing S. by E from the harbour the water here is very shoal, and a reef of large boulders extends into the Lake S E. for 300 or 400 yards, which must be given a wide berth

From the point of land about midway between Whitby and Oshawa, there is another reef of large boulders running out E S E. into the Lake.

PORT DARLINGTON

The Port of Darlington is 4 miles to the eastward of Oshawa, 50 miles E. N E of Toronto, and 20 miles W by S. of Cobourg

The Harbour Company have much improved the anchorage at this port by extending the piers into 12 feet water and dredging the land locked basin within, where vessels drawing 9 feet or more may lie in safety in any weather

The W pier extends about 50 feet further south than the E. pier whereby the roll of the Lake during a S. W blow is materially broken

LIGHT.

A lighthouse is erected on the E. pier but, although the light is bright and good, it, in common with most of the Harbour lights on the Canada side, is far too low to be seen at any great distance in the Lake

RABY HEAD.

One and a half miles W of Darlington is the high, perpendicular and bluff clay point called Raby Head. Near the Lake it is destitute of trees or bushes, but further back stands a farm house and barn, surrounded by several lofty poplars and other trees.

Neither the buildings nor the trees can be seen from the Lake when due south of Raby Head.

Darlington is the Port of Bowmanville, from which it is distant five miles the Grand Trunk Railway Station is within half a mile of the shipping harbour

For Courses, &c., see Bond Head

BOND HEAD, OR PORT OF NEWCASTLE

Between 4 and 5 miles E by N of Darlington is the Port of Bond Head. It consists of a short pier out into 16 feet water but from its exposed situation can only be approached in fine weather or when the wind is off shore.

DANGER.

Four miles E. of this port there is a large boulder some distance in the Lake, called the Peach Stone, and 4 miles E. of this, again, there is a reef of boulders extending 200 or 300 yards into the Lake in a southerly direction off a headland.

COURSE.

In running from Darlington to Port Hope or Cobourg, steer E. ¼ N. for 18 or 20 miles to avoid these dangers, giving the shore a good mile berth; then N. E. by E. ½ E. for Port Hope and E. N. E. ½ E. for Cobourg.

PORT HOPE

Twenty-three miles E. ¼ N. of Darlington is Port Hope Harbour, which is formed by running two rows of piers or crib work out into 13 feet water, having a pond or basin at their inner or northern extremity.

During a South, S. E. or S. W. gale, this Port cannot be made by large vessels drawing over 9 feet water with safety, owing to the tremendous swell rolling in from the Lake; besides which, the piers being only 125 feet apart at the mouth, and the basin very small, there is not room to check the speed of a vessel, or to moor her without danger to herself or others.

During a southerly gale, also, the swell in the basin is so great as to cause much injury to vessels by rubbing.

From any wind N. of E. or W., however, this is a perfectly safe and snug harbour.

LIGHT.

The Lighthouse is built on the E. pier—a fixed white light.

DANGER.

See Cobourg.

COBOURG

The Harbour of Cobourg is situated seven miles east of Port Hope, and is formed very much in the same way. A shifting bar of sand is thrown up during a S. W. gale, which renders the entrance at times still more dangerous than Port Hope for vessels of deep draft. The Harbour is more exposed, and when once entered, more secure, than that of Port Hope, having a second or inner basin with plenty of water where no sea can injure or disturb the vessels that lie therein.

The mouth of the harbour is 120 feet wide, with water varying from 10 to 12 feet.

LIGHTHOUSE.

The lighthouse is built on the E. pier 20 feet in height; the light is bright and good, and can be seen on a clear night seven or eight miles off.

DANGERS.

In entering this port, particularly at night, great care must be taken not to run too close to the south end of the west pier where broken crib work and numerous piles project nearly 100 feet further into the Lake than the end of the E pier.

SHOAL.

Midway between Port Hope and Cobourg there is a dangerous shoal called Gull Island, which is about two miles long, and about one mile from the shore. It is sometimes bare, and has erected upon it a lighthouse 45 feet high, having a bright fixed light, which on a fine night can be seen from ten to twelve miles.

When sailing between these ports, give the shore a good two miles offing and on no account attempt to pass between the lighthouse and the land.

VARIATION OF COMPASS.

When within 20 miles E. or W. of Cobourg, allow ¾ a point W. for the variation of compass.

REMARKS.

In running down the Lake from Hamilton to Long Point, there is nothing by which one harbour light can be distinguished from another with the exception of the red light on the Queen's Wharf, at Toronto, and that cannot be seen a mile or two south of Gibraltar Point. Would it not be desirable, therefore, in so important a port as Cobourg where all the steamers plying between the head of the Lake and Kingston, are in the habit of calling besides a numerous sailing craft, to have the light coloured so as to distinguish it from all others? This could be done at an expense of a few pounds, by substituting stained glass, either blue, red, or green.

COURSES AND DISTANCES.

Cobourg to Toronto, W. S. W. ¼ W. 73 miles.
" Port Dalhousie, S. W. ¼ W. 110 miles.
" Burlington Canal, S. W. by W. 113 miles.
" Rochester, S. E. by S. 67 miles.
" Oswego, E. S. E. 105 miles.
" Long Point, E. ¼ S. 61 miles.
" Presqu' Isle Point, E. by N. 24 miles.

GRAFTON

The village of Grafton is about 8 miles E. of Cobourg, having a wharf run out from the land in the Lake into 16 feet water.

COLBORNE

Between 8 and 9 miles below Grafton is the village of Colborne, with a wharf for the accommodation of trading craft.

Both these ports are exposed to the heavy seas of the Lake, and afford no shelter to vessels, except when the wind is off shore, or to the northward of E. by W. The villages themselves being small, they offer no inducement to the numerous Lake steamers to touch at their ports, and which are frequented only by small schooners carrying wood, or in the fall of the year produce of different kinds.

DANGER.

One mile W. of Colborne there is a projecting point of land called Ogden's Point, off which is a reef of boulders.

In approaching the Port of Colborne from the Westward, care must be taken to give this point a wide berth.

COURSES AND DISTANCES

From Cobourg to Colborne, E. by N. 16 miles.
" Colborne to Presqu' Isle Point, E. by S. 8 miles.

PRESQU' ISLE HARBOUR.

Twenty-four miles E. ¼ N. of Cobourg is the west or bluff point of Presqu' Isle well wooded and with 90 feet water with a short distance of the shore.

LIGHTHOUSE.

Five miles N. E. by E. of this point will be seen the lighthouse which is 67 feet high and upon which there is a very good fixed bright light, that can be seen in fine weather from 12 to 16 miles.

Immediately under the lighthouse, to the southward, there is shoal water with boulders; but by keeping half a mile from the shore this danger is easily avoided.

CHANNEL.

The channel which leads into this fine harbour now becomes difficult, owing to the shoals which surround it being entirely destitute of buoys or beacons to mark them.

When making this harbour in the day time steer to within ¾ or ⅞ of a mile S. by E. of the lighthouse; thence N. by E. for a very large and solitary *Pine Tree* which stands on the main land, some distance from the shore. (This object is so conspicuous as to render a mistake impossible.) Continue this course for a mile and a quarter or until the range lights (in the harbour) are brought into line; then alter your course, and steer S. W. directly for the centermost of the two lights.

HARBOUR LIGHTS.

At night, as the pine tree cannot so well be seen, steer N. by E. until the range lights are seen in line; then change your course, steering directly for them, (that is S. W.) keeping within fifty yards N. of the point on which the range light is built, (or even nearer,) as there is from 18 to 23 feet water directly under it. Having passed this point, anchor in the little bay between the two range lights.

DANGERS.

1. Between the upper lighthouse on the S. E. point and the range light on the N. E. point, extending in a north-easterly direction for about ¼ of a mile, is a shoal called

the "*Middle Ground*," having only from 4 to 6 ft. water on it, and formed of coarse gravel, sand, and mud. Captain Hallett, who has traded to this port for many years, told me, that when the Lake is high, he is in the habit of taking his schooner across that shoal, through a channel close to the two lights, his vessel, when laden, drawing 9 feet.

2. To the north of the lighthouse built on the N. E. point, running out from the main land, there is a low, marshy spit, destitute of timber, but easily recognised by a large dead Elm tree, bearing due N. of the lighthouse: from this point, extending west and south-west, there is another formidable shoal, upon which the *Passport* got ashore on 29th October, 1856.

I have called this, Elm Tree Point and Shoal: the channel between the beacon light, middle ground, and elm tree shoal, is about ½ a mile wide.

3. W. N. W. of the second range light, there is another small shoal called, "*Four Acre Shoal*," nearly half a mile from the shore, but with plenty of water all round it. The existence of this shoal renders it hazardous at night to stretch too far into the bay beyond the second range light.

4. Two miles E. S. E. of the main lighthouse, there is a dangerous rocky shoal in the Lake, with only from 3 to 5 feet water upon it. It is to the eastward of the course steered from the lighthouse for the Scotch Bonnet, and one mile S. E. of this, again, there is another but smaller shoal.

These shoals would materially obstruct the entrance into Weller's Bay.

SCOTCH BONNET LIGHTHOUSE.

The Board of Works have just completed an excellent lighthouse on Egg Island, or the Scotch Bonnet, which is one mile S. S. W. of Nicholas Island. It was lighted for the first time in September 1856. A bright fixed light bearing S. E. of Presqu'Isle Light. Can be seen 15 miles.

REMARKS.

This nearly land locked harbour of refuge, when once entered, is perfectly secure from every wind or sea: there is plenty of water with good holding ground: its dimensions are ample for the whole navy of the Lake: it is well lighted: it is easily entered with any wind except from the N. W.: and when it blows from this quarter shelter is easily obtained in many other places: yet, from the want of a few beacons or buoys vessels often keep the open Lake or run for much less secure places, rather than face the dangers of the shoals.

COURSES AND DISTANCES.

From Lighthouse to Presqu'Isle Point, S. W. by W. 6 miles.
" Presqu'Isle Point to Cabouge W. ½ S. 24 miles.
" " Lighthouse to Scotch Bonnet, S. E. 10 miles.
" Lighthouse to Genesee River S. ½ E. 60 miles.
" Scotch Bonnet to Long Point, E. by S. 25 miles.

WELLER'S BAY

"The Underwriters, Forwarders, Shipmasters, and others interested in the navigation of Lake Ontario are about to petition the Government for the construction of a

Harbour at Weller's Bay, in the County of Prince Edward. An opening one hundred rods wide, with a channel one hundred and fifty feet wide and fourteen feet deep, has within a few years past, been made through the beach from the Lake to Weller's Bay, which is said to be capable of sheltering all the vessels which navigate Ontario. The entrance to the harbour of Presqu' Isle is difficult and frequently attended with casualties, and it is justly considered necessary to construct a harbour at the place mentioned, which the mariner can safely enter in a storm. Several vessels, as our readers know, were driven ashore within a few miles of Weller's Bay on rather the opening leading into it, which might have been saved, had the entrance been known to the masters.

There can be no doubt that the Government will entertain the prayer of the petitioners, and immediately take proper steps to erect a Harbour of Refuge to our fresh water seamen, that will serve to encourage them in their arduous and dangerous calling.

In fact, "it is the duty of Government to render every aid in facilitating and advancing the interests of marine enterprises, which contribute so largely to the revenue of the Province and the convenience of the people; and we feel confident the object will be acceded to without any circumlocution or useless delays."—*Kingston News*, Jan 7, 1857.

If the entrance to Weller's Bay was not rendered more dangerous than the entrance to Presqu' Isle Harbour, by the existence of the two shoals to which I have above alluded, the prayer of the petitioners would, in all probability, have the favourable consideration of the Government. But the existence of these two dangerous shoals at the very entrance of the bay, exposed as they also are to the full sweep of the Lake, during a south or south-west wind (the very winds which would render it necessary for vessels to run into Weller's Bay for shelter) would I conceive be an insuperable objection to the expenditure of so large a sum of public money as it would require to make this bay an efficient harbour of refuge during a dark and stormy night.

Far better would it be to petition the Government to expend one fourth of the sum in improving the entrance into Presqu' Isle and which is already well lighted. The shoals, bad as they are, are so hard-looked and protected from the heavy surge of the sea, as hardly to endanger any vessel which might be so unfortunate as to get aground on them.

The shoals opposite the entrance to Weller's Bay are rocky and have only from 3 to 6 feet water on them. They are also so exposed that any vessel running ashore on them during a gale, must soon go to pieces.

KINGSTON HARBOUR

Kingston Harbour next to the Bay of Toronto is the best natural harbour on Lake Ontario. The approach to it, however is intricate—consequently dangerous.

It is situated at the N. E. corner of Lake Ontario, just where the Lake terminates and the River St. Lawrence begins.

CHANNELS.

There are three channels by which it may be made.

1st. The Eastern Channel between Wolfe Island and Simcoe or Gage Island. This is generally used by small craft only having a several places little more than two fathoms water.

2nd. South Channel, between Simcoe or Gage Island and Snake Island: here, also, the water becomes shoal, having only 2½ fathoms.

3rd. North Channel, which is the best. It runs between Snake Island and the main Land, which although it increases the distance a little, is by far the safest, having from 4 to 10 fathoms water in it.

From South Bay Point in Prince Edward's District on the west, to Stoney Point in New York State on the east, the navigation of the Lake is interrupted by numerous islands, shoals, and rocks, which renders the approach to Kingston Harbour dangerous to vessels unacquainted with it.

SOUTH CHANNEL.

In making this harbour from any of the western ports of the Lake, steer for the Mid-Channel between the Real and the False Ducks. Then alter the course to N. E. ½ E., which will take the vessel through the south channel direct to Kingston Harbour.

Should there be a head wind, make this course the best tack, never passing it to the southward, but stand off and on to the northward and eastward until inside Nine Mile Point on Simcoe Island; keep close to Four Mile Point, (on Simcoe Island,) leaving Snake Island, which may be known by a single tall elm tree, and upon which the Board of Works are about to erect a lighthouse,) bearing N W or to the left from thence the course is clear to Kingston.

In running along Simcoe Island from Nine Mile Point Lighthouse* to Four Mile Point, do not follow the curve of the island, as the water becomes very shoal.

NORTH CHANNEL.

Should the North Channel be preferred, when inside Nine Mile Point Lighthouse, steer due North till midway between Snake Island and the main land: this course will clear a shoal bearing N W of the lighthouse and your Snake Island guard. Then bear to the eastward, thence due east into the harbour.

In making Kingston from Oswego, two courses may be taken. One N will take you to Nine Mile Point, clearing the Ducks, leaving them to the westward, and Pigeon Island and Charity Shoal to the eastward.

North by West (which is the best course) will take to mid-channel between the True and False Ducks.

DUCKS LIGHT.

At night the stationary bright light of the False Ducks will be first seen, but in the day time, South Bay Point, which is high bushy land will be seen before the Ducks.

SOUTH BAY POINT.

Should a gale be coming up from the W or S. W. good anchorage and shelter can be obtained inside South Bay Point: to make it, keep to the eastward of the Outer Drake Island and to the north of the Upper Drake (the False Ducks) and anchor off the N E. point, or run alongside a small wharf which will be found there.

UPPER GAP.

If obliged to run for shelter behind South Bay Point, Kingston may afterwards be made by passing through the Upper Gap, that is, between Lullan Point on the West,

* The Lighthouse on Nine Mile Point is 40 feet high, and furnished with a good stationary bright light.

and Amherst Island to the East. Steer N by E till between Amherst Island and the main land, then E N E. ½ North of the Brothers, thence E. to Kingston.

REAL DUCK

Shelter and good anchorage can also be obtained inside or to the N E. of the Real Duck Island.

NOTE.—There is a channel between South Bay Point and the Outer Drake, which, however should not be attempted except with a leading wind in fine weather and by a good pilot, as a dangerous shoal exists between the Island and the point

COURSES AND DISTANCES.

Kingston to Snake Is and S. W by W 4 miles.
Nine Mile Point, S. W by S. 8½ miles.
Mid Channel between Two and False Ducks, S. W ½ W 27 m
Nine Mile Point to South Bay Point S W by W 26 miles.
" W end of Gallow Island (lighthouse) S. by E ½ E 63 m
Mid Channel between Ducks to Long Point, W S. W 26 miles
" " Oswego, S by E. 46 miles.
" " Genesee, S. W 75 miles.
" " Port Dalhousie, W S. W 106 miles
From Long Point Light to Toronto, W by S. 130 miles.

SACKETT'S HARBOUR.

I have not visited this Harbour, and I have experienced some difficulty in obtaining authentic information respecting it that which is here given, however can be relied upon.

It is not a port of so much importance as a mercantile point of view as many others, although from the great depth of water in the bay its secure and sheltered position, and tolerably easy access it should be ranked amongst the best on the Lake These recommendations, together with its capabilities of being strongly fortified have induced the Government of the United states to make it their Naval Depot or Arsenal.

SITUATION

It is situated on the south shore of Black River Bay an arm of the Lake running several miles inland, having point Peninsula bearing W by N about nine miles Great Stoney Island and Great Gallow Island, bearing W by S eleven and fifteen miles respectively

LIGHTHOUSE.

The lighthouse is built on a rock called Horse Island at the South-Western point of Black River Bay, one and a half miles W of the Harbour It has a good fixed bright light. The lighthouse on the Gallow Island is at its S. W end, bearing W by S ½ S., distant 21 miles.

In making this harbour from the westward, steer for the mid-channel, between the Ducks and Galloo Island, thence E. by N direct into the bay, midway between the light on Horse Island and Point Peninsula.

From Oswego, N ½ E. for Galloo Light, and when well to the north of the Island, E. by N. as before.

From Kingston after passing Nine Mile Point on Simcoe Island two courses may be taken: 1st E. by W. for about ten miles, until south of Charity Shoal, thence E. S. E. 15 miles, till abreast of Point Peninsula, thence E. into the harbour; or, 2nd, if the wind be favourable, after passing Nine Mile Point, steer S. E. 24 miles till off Point Peninsula, thence E. as before. This course will leave Pigeon Island and Charity Shoal well to the westward.

There are other channels by which this harbour may be made in fine weather or under the guidance of a good pilot, but they are more intricate and dangerous than those laid down.

Black River Bay is clear of shoals or rocks, with depth of water sufficient for vessels of the largest size.

COURSES AND DISTANCES

From Hallett's Harbour to Light on Horse Island, W. by S. 14½ miles.
" " Point Peninsula, W. by N 9 miles
" " N. E. point of Great Galloo Island, W. by S. 15 m.
" " N. E. point of Great Stoney Island, W. by S. 11 m.
" " S. E. point of Ducks Island, W. ½ S. 28 miles
" " Long Point Light, W. by S. 40 miles
From Horse Island Light to Stoney Point Light, S. W. by W. 12 miles.

CAUTION

Nearly mid-channel between Stoney Point and Great Stoney Island there is a shoal with only seven feet water:—
From Stoney Point to the Ducks, passing to the Southward of the Great Galloo Island, W. by N. 32 miles
From the N. E. end of Stoney Island to the W. end of Grenadier Island, N. N. W. 11 miles.

CHARITY SHOAL.

From Nine Mile Point to centre of Charity Shoal, S. by E. 9 miles.
" Great Galloo Light to do. N by W 15 miles.
" Horse Island Light to do. W N W 23 miles.
" Anchorage at Real Ducks to do N E by N 12 miles.
— Ducks Light house to do. E N E. 20 miles.

PIGEON ISLAND.

From Pigeon Island to Nine Mile Point Light N. 7 miles
" " Charity Shoal, S. E. by E. 8½ miles.
" " Galloo Light S. S. E. 16 miles
" " Horse Island Light, E. S. E. 21 miles
" " Point Peninsula, E. by E. ½ E. 18 miles
" " Ducks Light, S. W. by W. 15 miles
" " Anchorage at Real Ducks, S. S. W. 12 miles.

PORT ONTARIO

Twenty miles N E. by E of Oswego, and N of Mexico Bay is Port Ontario on Salmon Creek a place of no considerable importance, yet possessed of a good harbour which is entered between piers running W N W a considerable distance into the Lake

LIGHT

The Lighthouse is on the N pier end, is 52 feet high, bearing a fixed bright light.

The land both north and south of it is very low and cannot be seen at any great distance there is, however good depth of water in every direction.

I have not been into this port, and have been unable to obtain reliable information as to the soundings inside the harbour

OSWEGO HARBOUR.

This once lost Port is a great measure reclaimed from the Lake by skilful engineering, and at an enormous expense It is situated at the mouth of the Oswego River, and protected from the heavy seas caused by westerly and north-west gales by walls of solid masonry

Capac ous as are the basins, slips, and other parts of the harbour they are even now barely sufficient for the accommodation of the numerous steamers, propellers, and schooners, which bring their valuable cargoes from all parts of the Upper Lakes to this busy and prosperous city

The enterprising merchants and citizens of Oswego aware of the munificent accommodation afforded to the shipping visiting their port, are now engaged in devising plans for the enlargement and improvement of their important harbour amongst those may be mentioned—

1st. The construction of a pier from a point ¼ miles west, to a point north of the lighthouse, 800 o 1 000 feet in the Lake.

2nd. A canada harbour east of the river and north of the Fort.

3rd The construction of a lock to admit vessels into the pond above the dam, 600 feet wide and one mile long

The river Oswego has its source very near the head of the Mohawk it passes through Lake Oneida, and in its course to Lake Ontario receives the Seneca River besides the waters of several lesser streams and many small lakes. The waters from these in the spring and fall of the year so greatly swell and increase its current, that sailing vessels are unable to ascend it except when favoured by a strong northerly breeze

To obviate the difficulty numerous small but powerful tug boats are constantly plying about the mouth of the harbour, and when a large and heavily laden schooner comes within a mile or so of the port, they run out, so as upon their helpless prey and conduct it alongside the wharf or warehouse to which it may be consigned with as much ease and precision as a carriage can be driven up to a street door

There are no rocks or shoals to be feared in approaching this port the only danger consist in the very heavy sea, which rolls into the harbour during a westerly blow and the want of room to manœuvre or work a vessel when inside

LIGHTHOUSE.

The lighthouse is built on the west pier is 82 feet high, and has a very good bright fixed light

COMPASS.

When within twenty miles East or West of Oswego, allow 1° or 1 30' West for variation of compass.

COURSES AND DISTANCES.

From Oswego to Kingston :—Due N w ll take ready final Ducks to Nine Mile Point on Simcoe Island, which has a fixed light, 56 miles.

N by W which is the best course will take to the light of False Ducks, 60 miles, then N E. ½ E. for Kingston Harbour 10 miles *

From Oswego to Big Sodus Bay W S W ½ S 32 miles
" Genesee River W by S ½ S. 66 miles.
" Port Dalhousie, W till abreast of Thirty Mile Creek, then S S W 164 miles
Toronto, W ½ N 172 miles.
" Cobourg, W N W 105 miles.
" Long Point, N W ½ W 48 miles.

LITTLE SODUS BAY

About seventeen miles S W of Oswego is Little Sodus, an inlet or bay of considerable extent, and with depth of water sufficient for the largest class vessels that sail on the Lakes. Unfortunately however the water in the channel does not exceed an average of six feet, so that this otherwise secure haven is almost useless.

The entrance is between piers 250 feet apart, run out 1200 feet in the Lake, into fourteen feet water The depth of water inside the bay ranges from twenty-five feet to forty feet. There is a light house

BIG SODUS BAY

Thirty-two miles W S W ½ S of Oswego, and thirty-six miles E. ½ N of Genesee River is Big Sodus Bay the most capacious and best harbour on the south shore of Lake Ontario

It is entered from the Lake by a channel 470 feet wide, between piers which extend out into thirteen feet water

* In the daytime, when steering for the False Ducks, the high bushy land of South Bay Point will be seen before the lighthouse, but at night, the light will be visible first.

HARBOUR LIGHT

The pier on the W side is 1,300 feet long, and has on its northern extremity a fixed bright beacon light: that on the E is nearly 1,000 feet long.

The average depth of water in mid-channel is ten feet, but immediately on entering the bay the depth increases from twenty-five to 40 feet, with good holding ground.

Should the wind blow heavily from the NW board, round the wooded and bushy spit marked P on the Chart, and anchor where indicated: here the vessel is protected from every wind or sea.

LIGHTHOUSE.

The lighthouse, which is 66 feet high, is built on a hill about three-quarters of a mile due W of the beacon light on the pier end. It is a good revolving light: can by seen ten or twelve miles in the Lake.

This picturesque and fine harbour runs south or into the land for about one miles, and in its widest part is upwards of three miles. It is but little frequented, being used principally for ship-building purposes: the harbor, however, is nearly exhausted.

Several small islands are situated at the upper or S end of the bay and a village, where provisions can be obtained, is reached by following the crib-work on the west side towards the lighthouse.

CURRENT

A strong current sets out of the bay about 2½ knots.

COURSES.

Brown's Point bears W by N ¾ miles, and Nine-mile Point (west of Oswego) E N E. ¼ N 26 miles.

Note.—This port cannot be mistaken at night, as it has the only revolving light between Port Dalhousie and Oswego.

GENESEE RIVER.

The port of Genesee, leading to the City of Rochester, is situated on the W side of the embouchure of the Genesee River.

It is protected from the violence of the Lake gales by piers about 2,000 feet long, running N E. and S. W into the Lake, and 400 feet apart. The river is narrow and tortuous, rendering it difficult to beat up: but the wharves, when once reached, afford every accommodation and shelter.

LIGHTS.

The beacon light is on the end of the W pier: the range or main lighthouse is 50 feet high, and built on the hill ashore: these must be brought in line to show the direction of the west pier. Both these lights are bright and stationary.

In making this port from the westward, bring the pier lights to bear S S. E. and on running into the harbour keep the pier light a little more than a vessel's length to the eastward of the lighthouse.

DANGER

About twenty feet off the end of the W. pier there are some piles and a sunken crib, which must be given a wide berth

NOTE.—In Owen's and Herbert's Charts, a shoal having only eight feet of water is laid down, midway between Braddock's Point and the pier ends. This supposed danger has no existence, there being plenty of water everywhere to within a short distance of the shore

COURSES AND DISTANCES

From Genesee River to Presqu'Isle, N. ½ W. 60 miles.
" " Mid-channel between Real and False Ducks N. E. 26 m.
" Galloo Island Lighthouse, N. E. ½ E. 67 miles.
" Oswego R. by N. ½ N. 66 miles.
" " Braddock's Point, N. W. by W. 10 miles
From Braddock's Point to Port Dalhousie, first W. by N. till opposite Oak Orchard Creek, then W. by S. 89 miles
" Toronto, W. by N. ½ W. 110 miles.
" Cobourg, N. W. by N. 67 miles.

COMPASS.

When off Rochester allow 1° for variation of compass

OAK ORCHARD CREEK

From the mouth of the Genesee River to the mouth of the Niagara River there is not a port or harbour where a vessel drawing six feet or upwards can enter, the only boat harbour being Oak Orchard Creek 25 miles W. of Rochester and 52 miles E. of Niagara.

The entrance to this Creek is between two piers running N. and S. into 8 feet of water and 100 feet wide. The west pier is 344 feet long, the east 754 feet; the basin or pond within has plenty of water and is well secured

There is no light house or wharf light

NIAGARA RIVER

The waters from all the Upper Lakes, after passing over the falls of Niagara descend the river for about seven miles in a rapid and turbulent manner so far as Queenston; the stream there becomes wider and deeper, and admits of free navigation for vessels of any size, until it empties itself into Lake Ontario, at a point S. E. by S. of Toronto 37 miles W. of the Genesee, and 12 miles to the eastward of Port Dalhousie.

At its mouth this river is about 1000 yards across with from 20 to 40 feet water and consequently it affords an easy entrance for shelter and good anchorage during a storm

The town of Niagara is a mile S of Fort Mississauga, on its W bank, where there are extensive wharves and the village of Youngstown, which is nearly opposite Niagara on the east side has also good wharves and accommodation for shipping.

LIGHTHOUSE.

The lighthouse is 78 feet high, and placed on the top of Fort Niagara, which is built on the E side of the mouth of the river It has a bright stationary light, which can be seen ten or twelve miles off

On entering this river keep near its centre, and bring Fort Niagara to bear S E. by E When W or W by S of the Fort, the shores become bold, and may be approached to within a short distance especially on the E side.

With a northerly wind meeting the current, there is a short chopping sea on the bar

DANGERS.

Extending into the Lake for about a mile N W of Fort Niagara is a shoal with only six feet of water on it, and under Fort Mississauga on the W bank there is another shoal extending E N and N W

COURSES AND DISTANCES.

From Niagara River to Port Dalhousie, W by S. 12 miles.
" " Burlington Canal, W ½ N 42 miles.
" " Oakville W N W 98 miles.
" " Toronto, N W by N 88 miles
" " Cobourg N E. 80 miles.
" " Long Point, E N E 126 miles.
" " Mid Channel between Real and False Ducks, E N E ½ E.

PORT DALHOUSIE.

To sailing vessels, this is without doubt the most important Port on the Lake. Every vessel bound to or from the Upper Lakes is obliged to pass through the Welland Canal, and consequently to enter or leave this Port. It has the advantage of being easily made in any weather and with any wind.

LIGHTHOUSE.

It is furnished with an excellent Lighthouse, built on the end of the east pier surrounding a revolving bright light

There are no shoals or dangers of any kind to be feared in approaching Port Dalhousie the only caution requisite for a sailor, is to guard against standing inside

the range of the West Pier in working in, as between it and the remains of an old wharf there are two rocks and a shoal (all below water) on which he would put his vessel ashore. The piers run N. and S. to the head, thence to the lock N. E. and E. N. E.; they are about 3,040 feet long 200 feet apart, with an average depth of 18 feet water. The basin or pond to the east of the steam-boat landing is too shoal to be of any service, and it reflects no little discredit upon the Commissioners for allowing so much valuable space to be lost, when at a comparatively small cost the capacity of this important part could be so greatly improved.

It has been told me as a fact, that between three and four miles N. or N. by W. of the lighthouse, the compass dips, and for a short time becomes so disturbed as not to be relied upon. I have not been able to verify this, but shall feel much obliged to any of the Captains frequenting this Port, communicating to me the result of their experience.

COURSES AND DISTANCES.

From Port Dalhousie to Burlington Canal, W. ¼ N. 32 miles.
" " Oakville, N. W. by N. 42 miles.
" " Toronto, N. by W. 33 miles.
" " Whitby, N. N. E. 53 miles.
" " Long Point, E. N. E. 136 miles.
" " Mid-channel between Real and False Ducks, E. by N. ¼ N. 174 miles.
" " Niagara River, E. by N. 12 miles.
" " Devil's Nose, E. by N. ¼ N.

PORT OF HAMILTON & BURLINGTON CANAL.

The Port of Hamilton occupies the extreme Western end or head of Lake Ontario; it is separated from the Lake by a long low ridge of sand and gravel, resembling the Peninsula opposite Toronto. This ridge stretches across from the northern to the Southern Shore in a S. S. E. direction, comprising that portion which is to the west side of large bay called Burlington Bay, the entrance to which is by means of a Canal upwards of half a mile long, with an average width of 200 feet.

Unlike most canals, or piers entering a harbour, the width is not uniform, the entrance from the Lake being its widest part, but as to Burlington Bay its narrowest, the former is 220 feet wide, the latter 150; while at the ferry (or about its centre) it is 150 feet across. During the year 1858 several alterations and repairs have been made. Additional crib-work has been added to the eastern or Lake extremity of the South Pier, 300 feet in length, and considerably higher than the old work. Instead of following the old line, or N. E. ½ E., the new part runs a more northerly course, or nearly N. E. by N., which has had the effect of making the entrance still more difficult than it was before, particularly when the wind is strong from the east or south.

I have heard from persons residing on the spot, that it is next to impossible for sailing vessels to enter that canal during a gale from the E. or E. E. without coming in contact with the end of the north pier whereby the weaker of the two is likely to be severely damaged. To obviate this catastrophe however several oak piles have been

driven into the bottom, which serve the purpose of a fender and materially lessen the concussion that would otherwise take place.

The same new arrangement has been made at the opening into the bay except that the new work is added to the north pier and the fenders to the south.

The old lighthouse which stood near the centre of the canal on the isthmus was destroyed by fire, and a new one has been erected on the east end of the south pier, with a stationary bright light, the old beacon light not being used.

The depth of water at the entrance from the Lake is variable, owing to a constant taking place during an easterly or south-east blow it is, however never less than eleven feet.

Burlington Bay is upwards of five miles long, and about three miles wide, with from twenty to forty feet of water except near its edges. There is good holding ground immediately inside the canal.

COURSES AND DISTANCES.

From the Canal to Toronto, N. E. 26 miles
" " Whitby N. E. ½ E. 70 miles
" " Niagara River E. ½ S. 42 miles.
" " Port Dalhousie, E. ½ S. 42 miles.

OAKVILLE

The Port of Oakville is 22 miles W. ½ S. of Toronto and 14 miles N. E. by N. of Burlington Canal.

The piers, which are about 100 feet apart, run nearly N. and S. in the Lake, into twelve feet water. Within there is a basin, which if properly dredged would afford excellent shelter and accommodation to a large number of vessels. As it now exists, there is little more than a channel by which schooners of 200 tons are enabled to run up to the storehouse to load or unload.

LIGHTHOUSE

The lighthouse is built on the East Pier although forty feet high it is so bad as to be scarcely visible six or seven miles in the Lake.

DANGERS

Between this port and Port Credit there is a shoal, and numerous large boulders extend a considerable distance out from the shore which should not be approached nearer than a mile.

COURSES AND DISTANCES.

From Oakville to Toronto N. E. ½ E. 22 miles.
" Burlington Canal S. W. by S. 14 miles
" Port Dalhousie, S. E. by E. 32 miles
" Niagara, E. N. E. 40 miles.
" Devil's Nose, E. ½ S. 100 miles.
" Long Point, E. by N. 156 miles

PORT CREDIT

This port resembles Oakville in its construction the piers being run out into deep water the pond or basin within is large, and would accommodate a large fleet of schooners, the want of a dredge, however renders it almost useless. This port is 12 miles S. W by W of Toronto, and 10 miles N E. by N of Oakville.

LIGHTHOUSE

The lighthouse is on the E pier low and bad and not even lighted with that regularity which the safety of vessels trading to the port absolutely demands

WELLINGTON SQUARE AND NELSON OR BRONTE.

These small ports are situated between Oakville and the Burlington Canal. Their wharves run out into ten feet water but from their exposed situation, except when the wind is off shore, they are rarely visited, except by the smallest class of coasting vessels

PORT BRITAIN.

Having been favoured by J Morrell, Esq the President of the Port Britain Harbour Company with a detailed account of the works now in progress and having received a copy of the Report, drawn up by H G O'Beirne Esq and Captain Weatherley for the Presidents and Directors of the Company it affords me great pleasure to be able to lay before the public an authentic account of this excellent Harbour of Refuge.

I am also indebted to Messrs. Armstrong, Lima, and Beere, for an excellent Photographic Plan of the Harbour of which I have availed myself

Port Britain is situated in the centre of the Township of Hope, in the County of Durham about sixty miles to the eastward of Toronto, four miles west of Port Hope, and nearly opposite the City of Rochester

The great advantages to be derived from this Harbour will arise from the splendid anchorage afforded by a blue clay bottom, entirely free of boulders, which is not to be attained to the eastward of this port and a lock under any extremity will form a safe and secure refuge for all vessels navigating the Lake, protected as it is by the bluffs both to the eastern and western limits of the harbour and will thus form a shelter for any vessel, in the almost impossible event of her inability to obtain the shelter of the piers or harbour itself

The Inner Harbour will be formed by the natural basin, having an area of about 15 acres, with 12 feet depth of water; and the Outer Harbour will be formed by piers extending about 770 feet from the shore into the Lake, 800 feet apart at the entrance, with 24 feet depth of water, enclosing a surface of six acres, and thus available to vessels of any draught navigating the Lakes. There will also be lights on both pier ends.

The progress of these works has been so rapid that the outer harbour will be accessible to vessels by the middle of June, and I am informed that a portion of the inner harbour will be completed so as to afford every accommodation to shipping for the fall trade.

It is not, however, the intention of the Company to complete the whole of the inner harbour immediately, their principal object being to ensure a secure Harbour of Refuge, extensive enough to meet the present exigencies of commerce, leaving the completion of the work, until such time as the rapidly increasing trade of the country may require.

Extracts from the Report of E. G. O'Brien, Esq., and Captain Weatherly.

"I first directed my attention to the anchoring ground, both outside and within the intended basin, good holding ground being essential to a harbour of refuge, and without which no place can be safely used as a trading port. This condition of a good harbour I found fulfilled more satisfactorily than I anticipated. * * *

* * * The bottom, both outside and within, as it will be when cleared out to a depth of about fifteen feet, is a clay, and as far as I could ascertain, free from boulders, making the best holding ground possible. The construction of the harbour, as shewn by the plans, I consider preferable to any of the artificial ports which I have seen; and only more safe, but must be larger than any other on this part of the coast of Lake Ontario. Opening wide east and west within it allows the entrance between the piers extending south into the Lake to be made more direct and wider than would otherwise be safe; and again, the piers protecting this entrance, diverging from each other as they approach the outer harbour give the wave rolling in, room to spread, and thereby lessen its force.

For all commercial purposes, it possesses the great advantage of ample room for wharves, stores, ship-yards, or lumber-yards, with the GRAND TRUNK RAILROAD running along its entire length, and accessible at all points.

The whole is surrounded by an amphitheatre of rising ground, at such a distance as to allow the freest circulation of air, and at the same time afford sufficient protection from westerly, northerly and easterly winds."

EXTRACT

FROM

"AN ACT TO COMPEL VESSELS TO CARRY A LIGHT DURING THE NIGHT, AND TO MAKE CERTAIN PROVISIONS TO REGULATE THE NAVIGATION OF THE WATERS OF THIS PROVINCE.

14 & 15 VICTORIÆ, CHAP. 126.

Passed, August, 1851.

1. * * * * * * * And it is hereby enacted by the authority of the same, That all Steamboats, whether propelled wholly or in part by steam, which are navigating the waters of Upper Canada, shall be provided during the night with lights, to be exhibited and affixed as follows:—

When under weigh,—a white light on flag-staff aft, a bright white light on the foremast head, a green light on the starboard bow, and a red light on the port bow to be fitted with inboard screens.

When at anchor, a common bright light at foremast head, as illustrated and explained in the Schedule A.

That Schooners and other sailing vessels shall be provided during the night with lights, to be exhibited and affixed as follows:—

When sailing before the wind, a pale light,
When sailing on the starboard tack, a red light, } on the Fore lift, or Knight head.
When sailing on the larboard tack, a green light, }
When at anchor, a pale light in the forward rigging.

Sailing Vessels running before the wind, or with the wind free, and making a Steamer's light dead ahead shall pass on the starboard side, but if to avoid [illegible] their tacks, or for any other good reason, they shall wish to pass on the larboard side, then shall show their green light, [illegible] that they are on the larboard tack when the Steamer will pass under the Vessel's stern.

In case of two Sailing Vessels approaching one another on opposite tacks, the vessel on the starboard tack shall keep the wind, and the one on the larboard tack shall keep away, always when making ship at night, shifting the light.

A Vessel in distress shall show both red and green lights.

2. And be it enacted, That any such Steamboat, Schooner or Vessel as aforesaid, shall be provided with a *Fog Horn* or a *Bell*, of a weight not less than twenty pounds, which it shall be the duty of the Master or person commanding such Steamboat, Schooner or Vessel, under the penalty in the seventh section of the said recited Act mentioned, to cause to be sounded or rung at regular intervals, of not less than five minutes at a time, with an intermission of two minutes, during the time that any such steamboat, schooner or other vessel as aforesaid shall be in a fog.

* * * * * * * * * * * *

11. And be it enacted, That if any damage to any person or property shall be sustained in consequence of the non-observance of any of the provisions contained in this Act, the same shall in all Courts of Justice be deemed, in the absence of proof to the contrary, to have been caused by the wilful default of the Master or other person having charge of such Steamboat, Schooner or other vessel as aforesaid, and the owner thereof in all civil proceedings, and such Master or other person in all proceedings, whether civil or criminal, shall be subject to the legal consequences of such default.

18. And be it enacted, That the penalties imposed by this Act may be sued for by information or action of debt, in the name of His Majesty, in any Court of Record of competent jurisdiction, and one-half of such penalty shall be paid to the informer.

SCHEDULE A.

The following Diagrams are intended to illustrate the working of the Rules prescribed by this Act

FIRST SITUATION

In this situation, the Steamer A will only see the red light of the vessel B, in whichsoever of the three positions the latter may happen to be, because the green light will be hid from view. A will be assured that the starboard side of B is towards him, and that the latter is therefore crossing the bows of A in some direction to port. A will therefore (if so close as to fear collision) port his helm with confidence and pass clear. On the other hand the Vessel B, in either of the three positions will see the *red*, *green*, and *mast-head* lights of A appear in a triangular form, by which the former will know that a Steamer is approaching *directly* towards him. B will act accordingly

It is scarcely necessary to remark, that the mast-head light will be always visible in every situation till shall the beam.

SECOND SITUATION

Here A will see B's *green* light only which will clearly indicate to the former that B is crossing to starboard. Again, A's *three* lights being visible to B, will appraise the latter that a steamer is steering directly towards him

THIRD SITUATION

A and B will see each other's *red* light only, the screens preventing the *green* lights being seen. Both vessels are evidently passing to port.

FOURTH SITUATION

Here a *green* light only will be visible to each, the screens preventing the *red* lights being seen. They are therefore passing to starboard.

FIFTH SITUATION

This is a situation requiring caution. the *red* light a view in A and *green* in B, will inform both that they are approaching each other in an oblique direction. A should put his helm to port, according to the standing rule mentioned in the first situation.

SIXTH SITUATION

Here the two coloured lights, visible to each will indicate their direct approach towards each other. In this situation it ought to be standing rule that both should put their helms to port.

ROYAL HUMANE SOCIETY'S DIRECTIONS

FOR THE

RECOVERY OF THE APPARENTLY DROWNED

CAUTIONS.

Avoid all rough usage.—Never hold the body up by the feet.—Nor roll the body on casks.—Nor rub the body with salt or spirits.—Nor inject tobacco smoke or infusion of tobacco.

METHODS OF TREATMENT

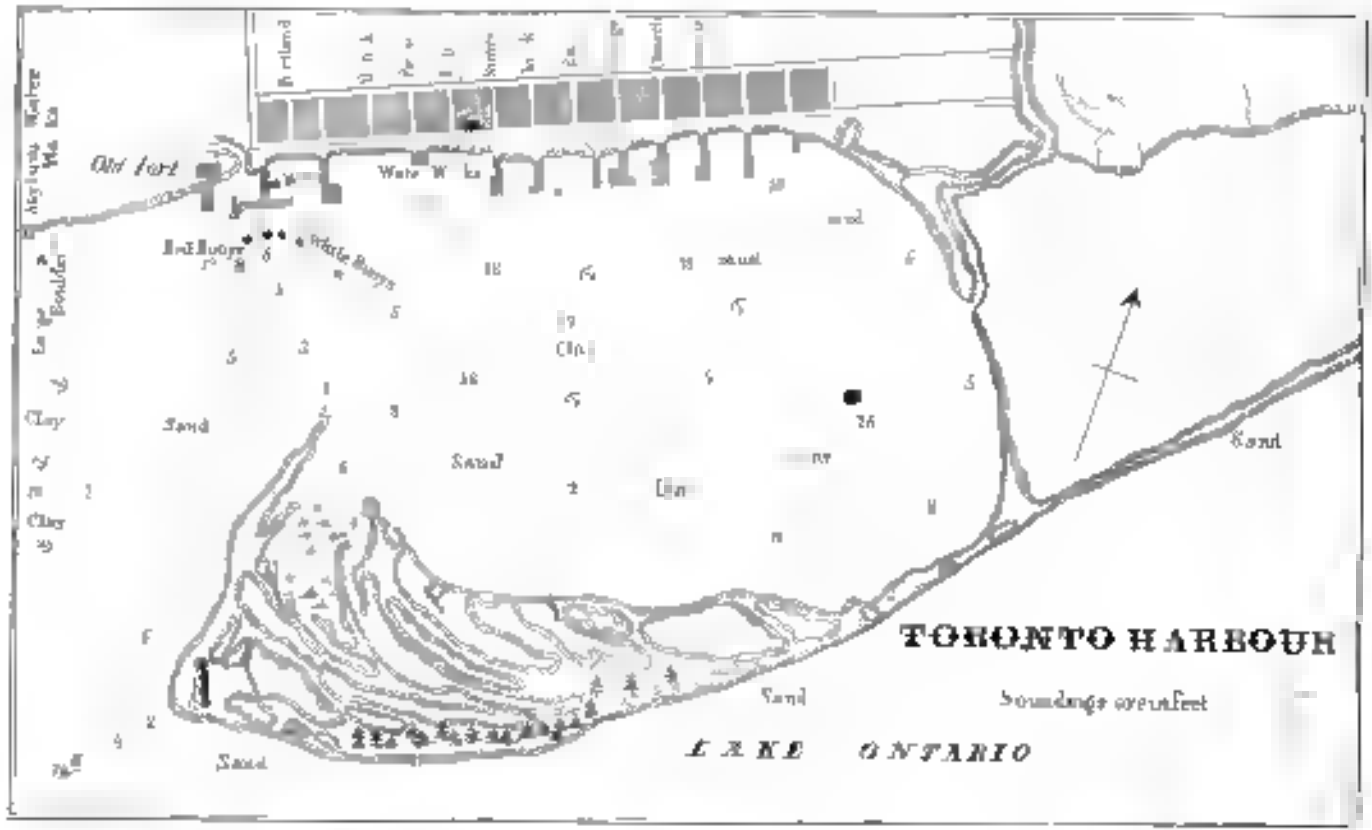
1 Support the body carefully with the head and shoulders in a raised position

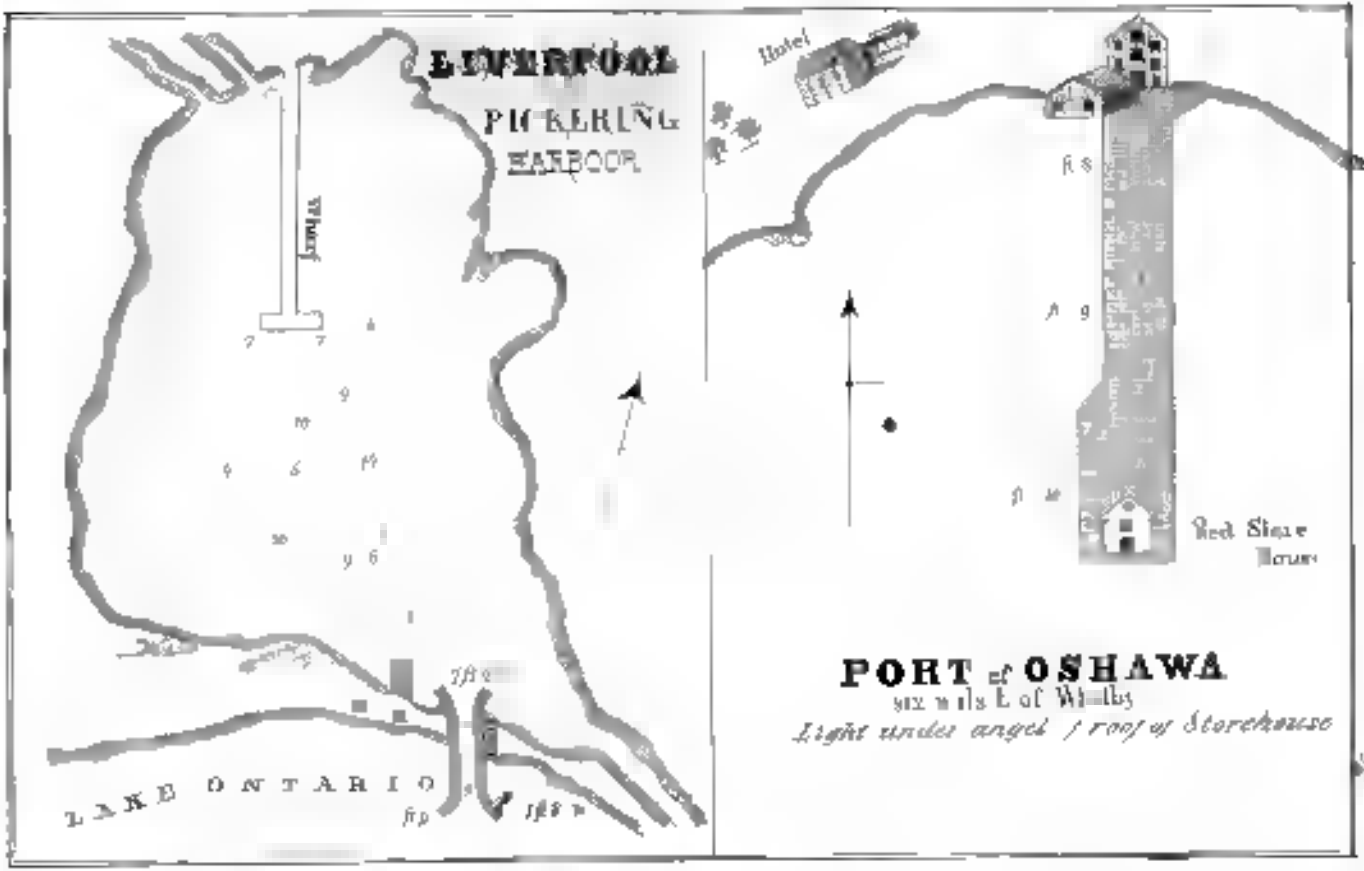
2 Strip the body and rub it dry then wrap it in hot blankets, and place it in a warm bed.

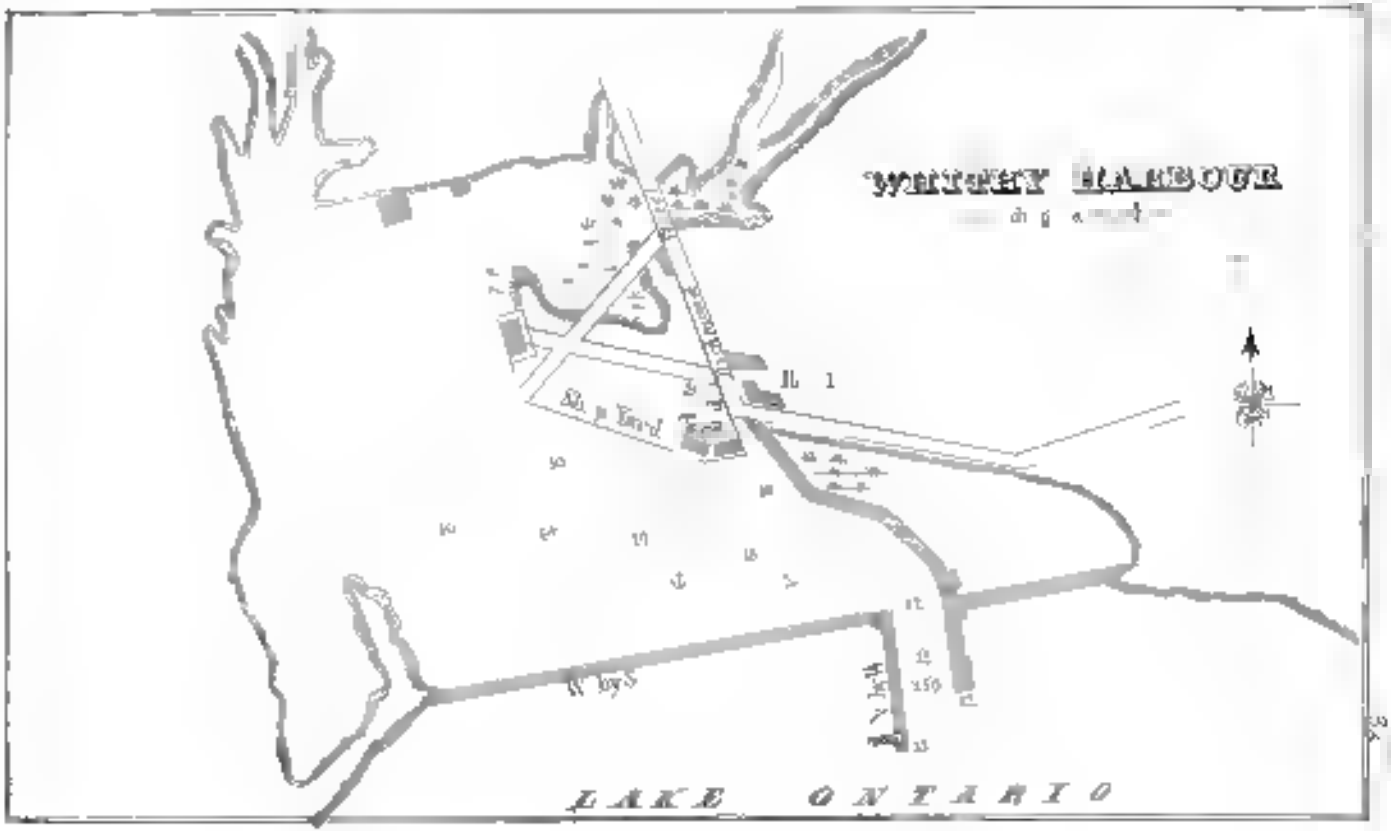
3 Wipe and cleanse the mouth and nostrils.

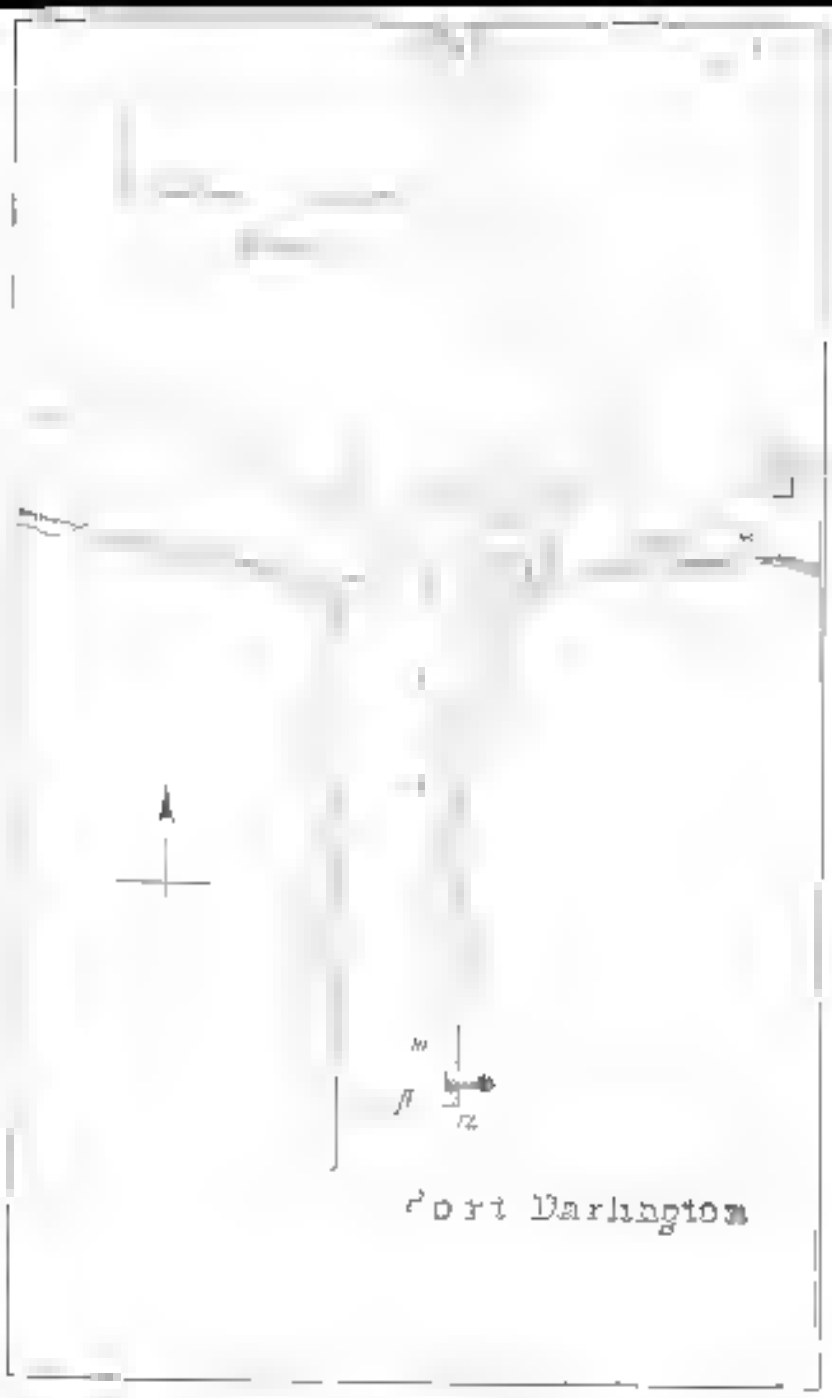
4 In order to restore the natural warmth of the body Move a heated covered warming pan over the back and spine.—Put bladders or bottles of hot water or heated bricks to the pit of the stomach, to the arm pits, between the thighs, and to the soles of the feet.—Foment the body with hot towels but, if possible,—Immerse the body in a warm bath as hot as the hand can bear without pain as this is preferable to the other means for restoring warmth.—Rub the body briskly with the hand do not, however suspend the use of the other means at the same time

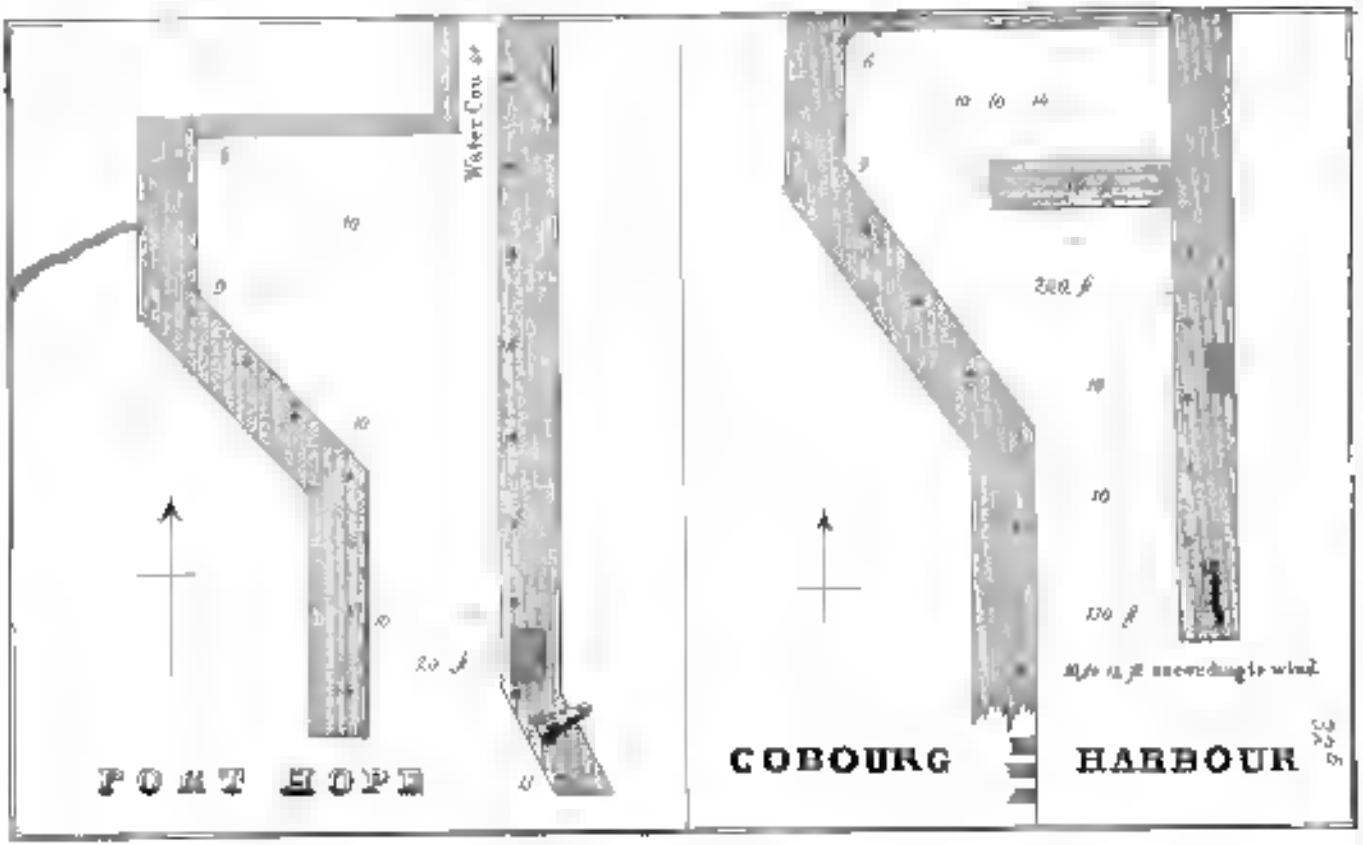
5 Apply smelling volatile or hartshorn to the nostrils If the power of swallowing be returned small quantities of warm wine or weak brandy and water may be given the patient should be kept in bed, and a disposition to sleep encouraged Great care is requisite to maintain the restored vital actions, and at the same time to prevent undue excitement. The treatment is to be persevered in for three or four hours It is an erroneous opinion that persons are irrecoverable because life does not soon make its appearance.

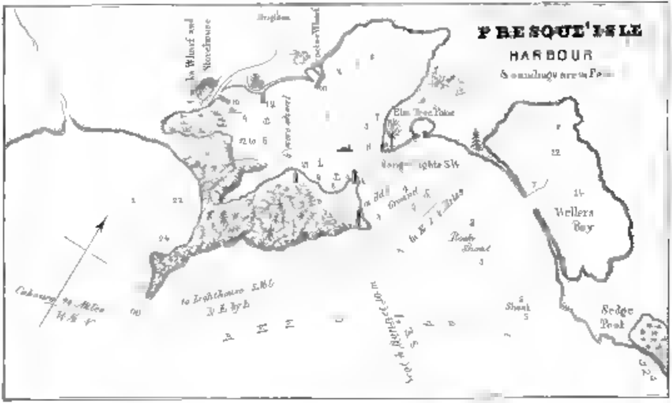

Old Fort
Red Buoys
White Buoys
Clay
Sand
Sand
Clay
Sand
Sand
Sand
TORONTO HARBOUR
Soundings in feet
LAKE ONTARIO

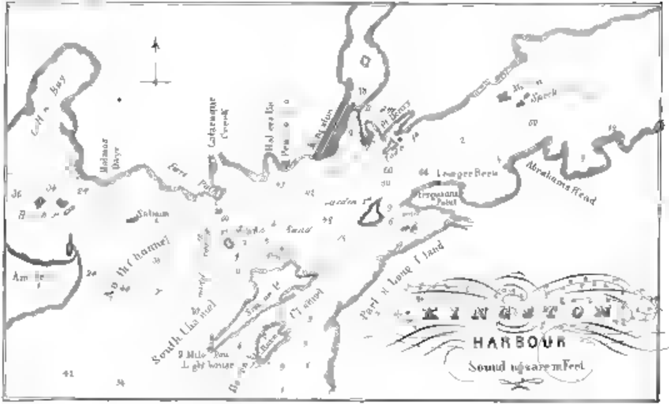

LIVERPOOL
PICKERING
HARBOUR
LAKE ONTARIO
Hotel
Red Store
House
PORT of OSHAWA
six miles E of Whitby
Light under angle of roof of Storehouse


WHITBY HARBOUR
LAKE ONTARIO

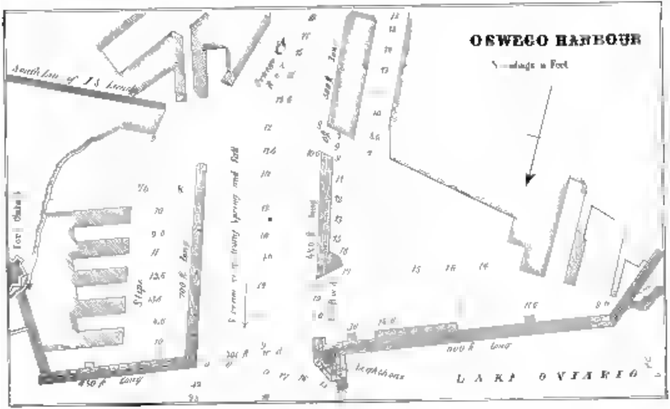

Port Darlington

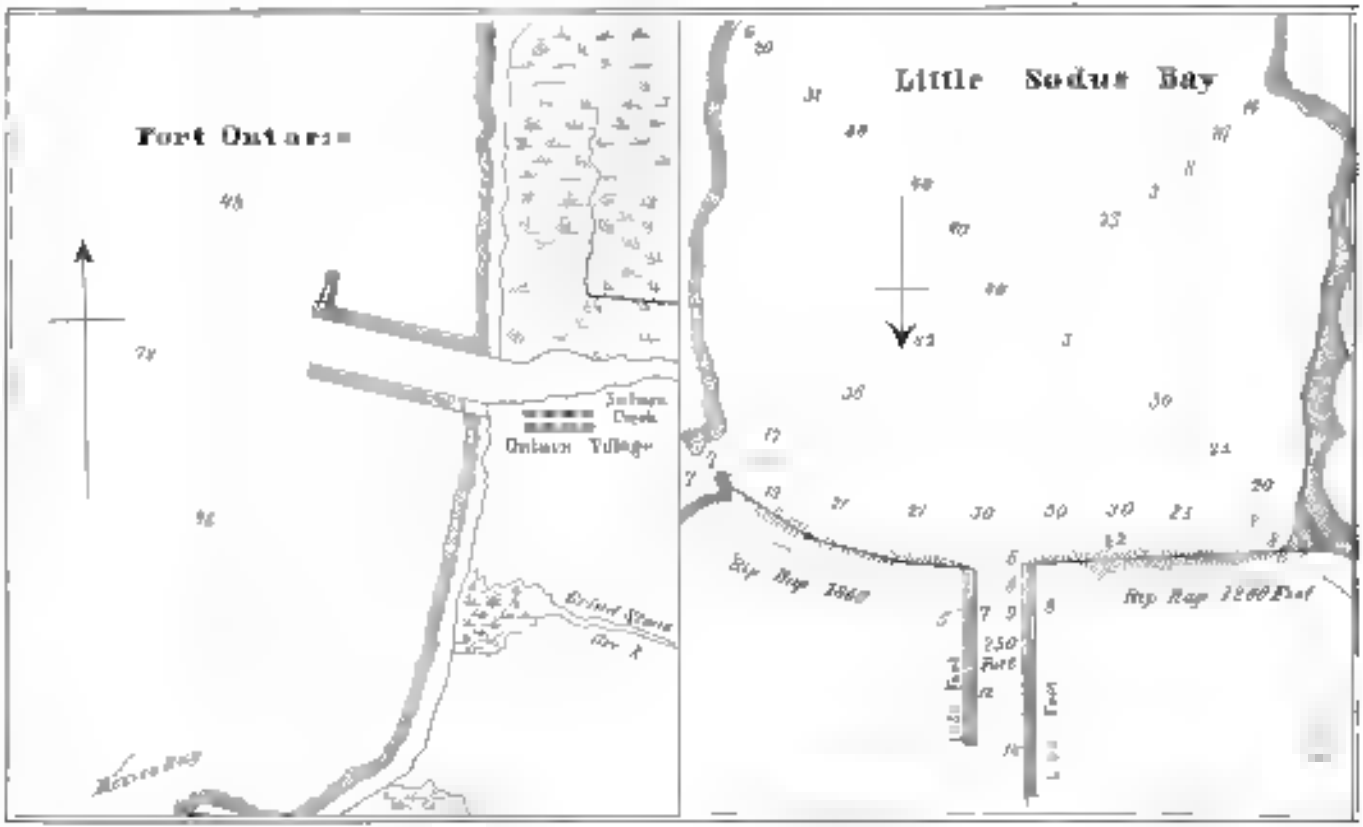

Water Course
PORT HOPE
COBOURG HARBOUR

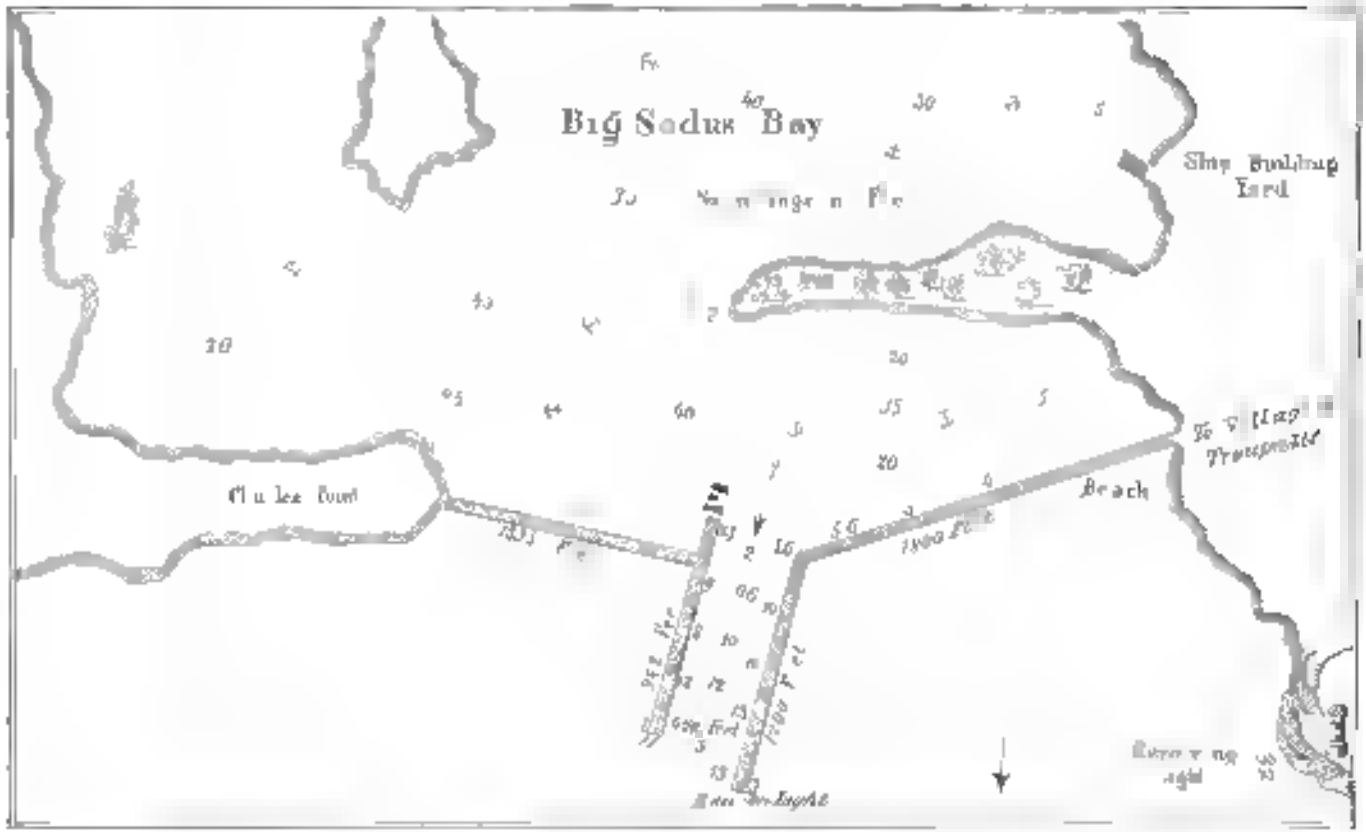

PRESQU'ISLE
HARBOUR
Elm Tree Point
Wellers Bay
Rock Shoal
Shoal
Brighton
to Lighthouse

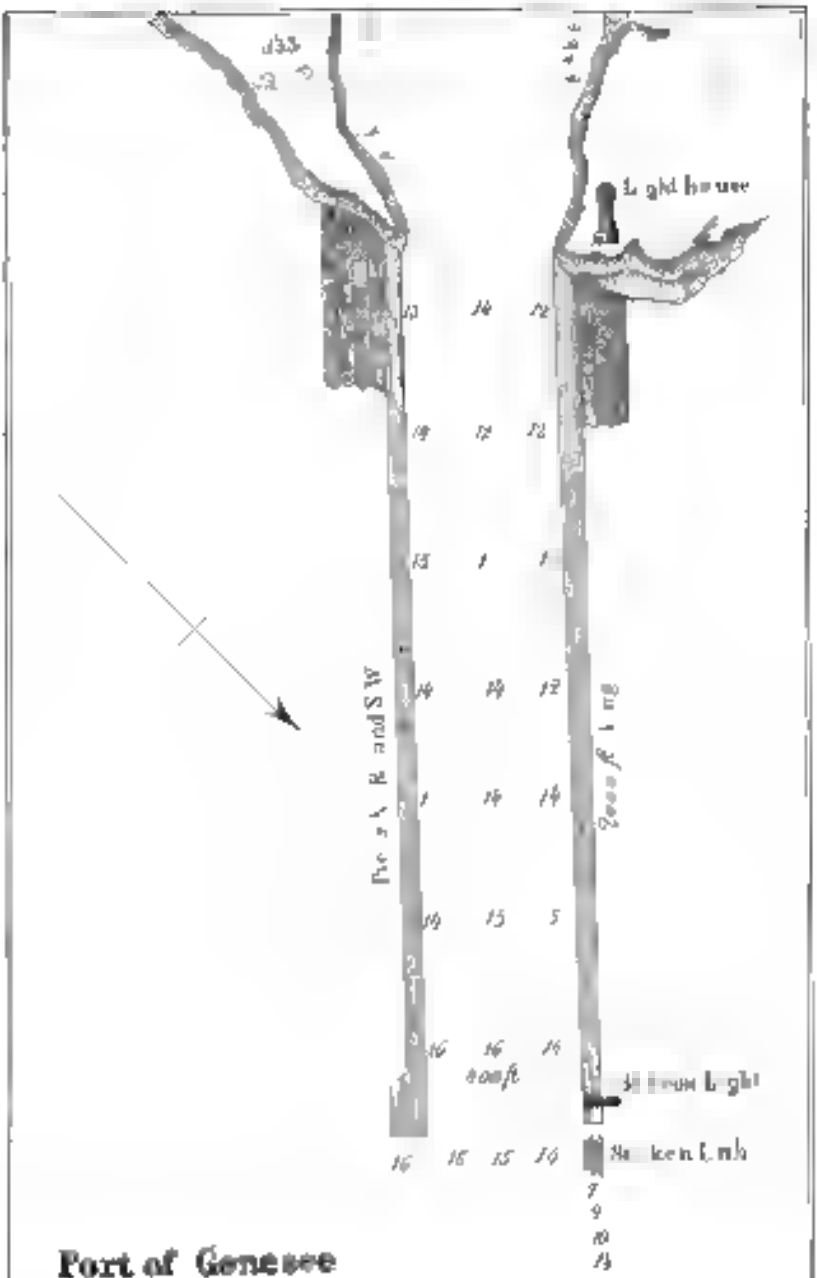

KINGSTON
HARBOUR
Sound ings are in Feet
Abrahams Head
Longer Reefs
Cataraque Creek
Snake I.
South Channel
Nine Mile Point
Light house
Long Island
Bay
Salmon
Fort
Point

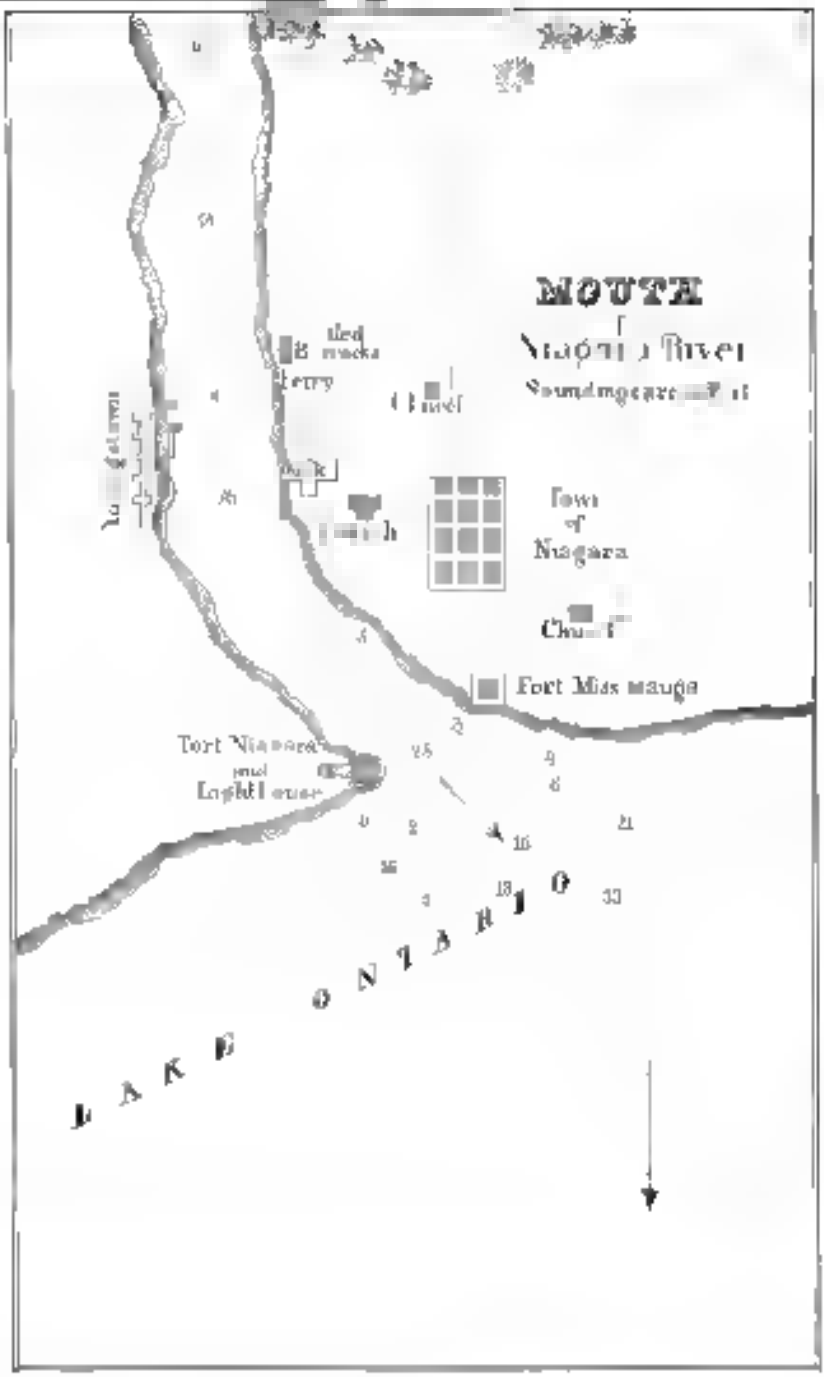
Stockholms Hamnar

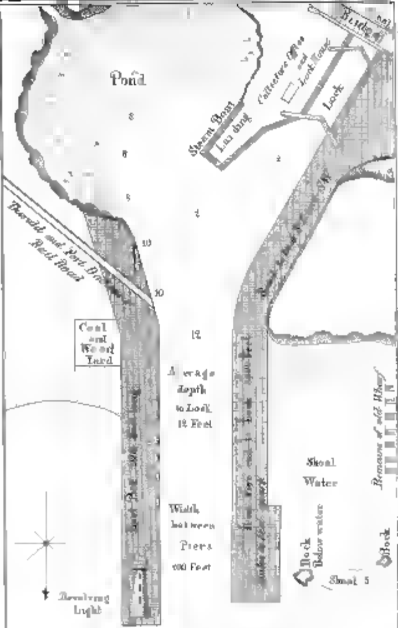

OSWEGO HARBOUR
LAKE ONTARIO
Lighthouse
Steps
700 ft long
450 ft long
440 ft long


Fort Ontario
Little Sodus Bay
Ontario Village
Stone Pier 1860
Stone Pier 1200 Feet
250 Feet


Big Sodus Bay
Ship Building Yard
Beach

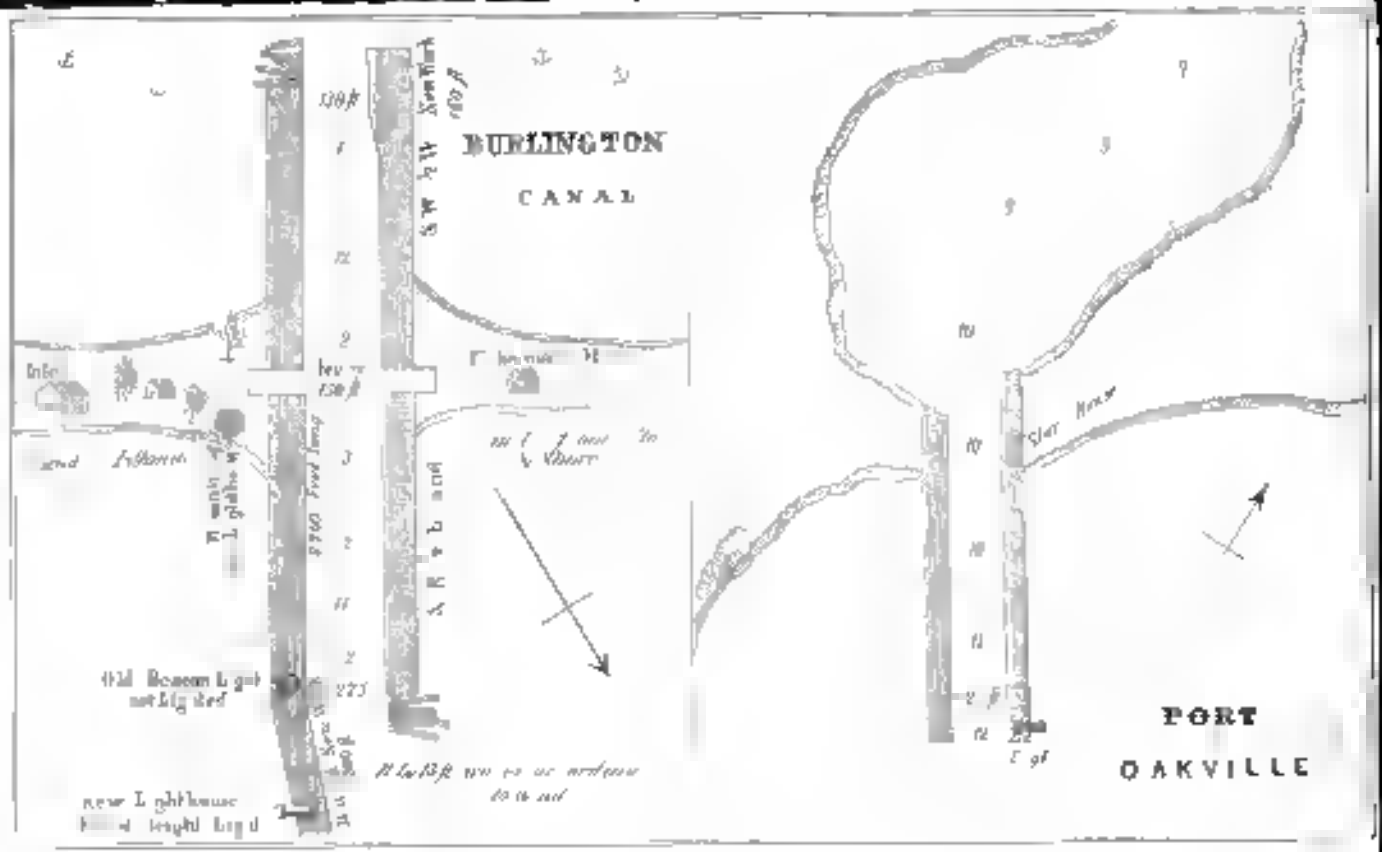

Light house
Port of Genesee

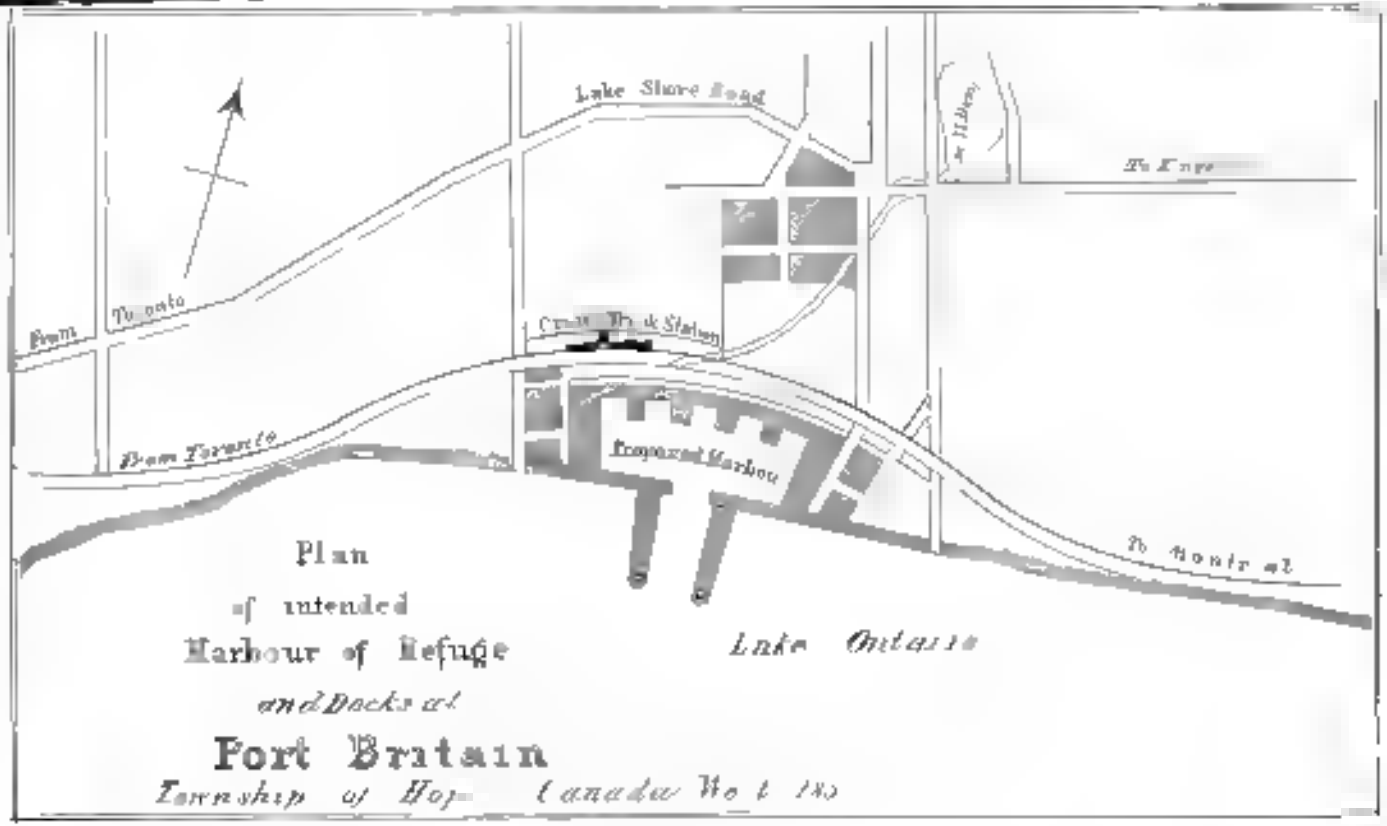

MOUTH
Niagara River
Town of Niagara
Fort Mississauga
LAKE ONTARIO



PORT DALHOUSIE

Soundings are in feet


BURLINGTON
CANAL
PORT
OAKVILLE



Plan
of intended
Harbour of Refuge
and Docks at
Fort Britain
Township of Hope Canada West 1856

HC H687h

BINDING LIST DEC 1

HG
H687h

THE

HARBOURS AND PORTS

OF

LAKE ONTARIO,

IN A SERIES OF CHARTS,

ACCOMPANIED BY A DESCRIPTION OF EACH

TOGETHER WITH THE LIGHTHOUSES, HARBOUR LIGHTS, DEPTH OF WATER, COURSES AND DISTANCES, &c &c.

COMPILED FROM AUTHENTIC SOURCES, THE CHARTS OF CAPT OWEN AND LIEUT HERBERT FROM RECENT SURVEYS,

AS WELL AS

FROM PERSONAL OBSERVATIONS.

BY EDWARD M^{c} HODDER, M.D.,

COMMODORE OF THE ROYAL CANADIAN YACHT CLUB

TORONTO

MACLEAR & CO. 16 KING STREET EAST

1857

PREFACE.

IN offering this little work to the public at the earnest solicitation of several of the Captains of schooners navigating these waters I have been actuated solely by a desire to supply a want which I have frequently heard lamented by all those with whom I have conversed on the subject.

Fully aware of the many deficiencies and imperfections which exist in it, yet I venture on its publication confident in its general correctness.

The materials I have derived from such authentic sources as have been within my reach from the Admiralty Chart of Captain Owen R N corrected to 1851, from surveys by the Corps of Topographical Engineers of the United States, and from information obtained from some of the oldest and most experienced Sailors on the Lake And here let me express my warmest thanks to Captain Carr of the *Maple Leaf* Captain Young of the *Chief Justice*, Captain W Bate of the Schooner *Water Witch* and others who have most kindly seconded my efforts by giving me every information in their power

I have myself visited every Port, with the exception of Sackett s Harbour and Port Ontario, and have sketched the entrances to them taken their compass bearings, soundings, &c &c but from the want of the time requisite as well as a practical knowledge in the use of surveying instruments, the charts must be looked upon only in the light of mere sketches not drawn to any definite or particular scale.

The distances from port to port may appear great, when compared with those which have commonly been acknowledged as correct I have, however carefully taken them from Captain Owens Survey and preferred giving them as by him laid down.

I shall consider myself most happy if my humble attempt should stimulate some abler hand than mine to improve upon and complete a task which I am well aware I have only commenced and it will gratify me still more if through any effort of mine a single life is saved, or the smallest craft that navigates this noble Lake is preserved from wreck

DEDICATION.

For the Members of the ROYAL CANADIAN YACHT CLUB this little work has been compiled, and to them it is dedicated in the hope that it may not only interest, but also create and encourage in them a taste for that invigorating, truly British pastime and manly sport, Yachting, and make it rival in their affections the glorious game of Cricket, the Hunt, or the Gun to the love and encouragement of these, may not Old England mainly attribute the courage and daring, the athletic frames and hardiness of her sons? for let it not be forgotten, that the effeminacy of a people is the surest forerunner of the decay of a nation.

May it also be useful to them, by giving such sure and accurate information relative to the various Harbours and Ports on Lake Ontario as may create in them a fondness for cruising, from the conviction that in any weather they can speedily reach some haven of refuge where their gallant little Barks may, in shelter and in safety, ride out the fiercest storm.

By their sincere Friend,

THE AUTHOR.

TORONTO, APRIL 1857

HARBOURS AND PORTS.

NOTICE.—The depth of water given in the various Ports is the mean or average depth taken in the month of August; at the opening of the navigation in the spring, when the Lake level is higher, this average will be exceeded by from ten to fifteen inches; in the autumn, before the rainy season sets in, it will be decreased from six to twelve inches.

TORONTO HARBOUR, OR BAY.

This spacious anchorage is without doubt the best natural harbour on Lake Ontario. It is nearly circular, being formed by the main land on the north, and by a long, low, and narrow spit of sand on the east, south, and south west, called the Peninsular or Island. It extends in a south westerly direction from the highlands in the township of Scarboro, and terminates in a point which suddenly turns to the north opposite the Old Garrison, and upon which trees of stunted growth are thickly scattered; thus is enclosed a beautiful basin of about two and a half miles in diameter, capable of containing a great number of vessels.

LIGHTHOUSE.

The south-west extremity of this island is called Gibraltar Point, on which is erected the Lighthouse, 66 feet high, having a fixed bright light.

CHANNEL.

The entrance to the harbour is by a narrow channel at its north west corner, between the Queen's Wharf and a row of buoys south thereof, which are placed in about ten feet water. The present channel is 300 feet wide, and about 600 or 700 feet long, having an average depth of 11 feet, but owing to the extreme narrowness of this passage, large and heavily laden vessels often find it difficult, sometimes impossible, to beat in or out against a head wind.

This channel, however, is being widened from year to year by the constant use of the dredge, and I believe it is the intention of the Harbour Master to continue this useful work until a clear available space of 400 feet has been obtained.

HARBOUR LIGHTS.

On the Queen's Wharf are placed the Harbour Lights—the northernmost a fixed red light, the other a bright beacon light on the western extremity of the pier. These lights when brought into line indicate the entrance to the channel. They bear N. by W. of the lighthouse on Gibraltar Point.

In working up the Lake from the eastward at night, give the shore a good two-mile berth when abreast of the Scarboro heights, otherwise the light on Gibraltar Point will be hidden by the trees on the Island. If bound into Toronto Harbour, keep nearly a mile to the W of the lighthouse then steer N for the harbour lights. In the spring and fall, fogs are prevalent, which hang near the surface, and do not ascend more than thirty or forty feet from the water; the harbour lights, then will not be seen, in which case, when well to the westward of the light house on the Point, steer for the North Star, immediately under which will be found the red light on the wharf.

When the fogs are so dense as to obscure all the lights or other land marks, the only safe guide is the lead line and the shore should not be approached where there is less than six or seven fathoms water.

SHOAL.

A sandy shoal stretches into the Lake for a quarter of a mile in a S. W. direction off Gibraltar Point, and is thence continued along the W. side of the Island extending N. to the Bar Buoys which mark the channel into the bay, at an average distance of a-quarter of a mile from the Island.

Vessels running for shelter from an easterly gale should anchor on the W. side of the Island about one mile from the shore, where there is good holding ground in six or seven fathoms water, mud and clay bottom. If too near the Island the anchor will not hold in the sand, and a sudden shift of wind will put them ashore on the bar.

DANGER.

There is a large boulder stone within five feet of the surface, nearly midway between the Queen's and Garrison Wharves, and a little to the south thereof.

REMARKS.

Much having of late been said regarding the advantages which Navigation, Commerce, and the City generally would derive from an eastern entrance to the Bay, I cannot allow the present opportunity to pass without raising my voice loudly against a measure, which if carried into effect, must be followed by the most disastrous consequences to the best natural harbour on Lake Ontario.

The authors of the able reports on "The Improvement and Preservation of the Toronto Harbour"—to whom prizes were awarded in May, 1854, by the Harbour Commissioners—are unanimous in condemning, not only as useless, but actually prejudicial a canal through the land or south-eastern portion of the Peninsula. If the integrity of the Island is maintained, there is not the slightest fear of the present channel ever closing, even if left entirely alone; it may become narrower but it would never become so completely blocked up as to convert the present bay into a small lake or pond; natural causes are at work to prevent it. During the eight months of the year that the Bay is clear of ice, the amount of water taken from its surface by evaporation alone is enormous; experiments prove incontestably that three-fourths of an inch a day is a fair average to allow for loss from this source alone. Let us assume however that only half an inch takes place. What will be the result? From the 1st of April to the 30th of November we have 244 days; this divided by 2, gives 122 inches, or 10 feet 2 inches, the quantity of water taken from the surface of the bay during the above-named period. Again taking the soundings of the Bay from the water's edge to its deepest part, we find that ten feet would be a

fair average depth thus we perceive that there is actually more water removed by evaporation than the Bay is capable of containing at any one time. How then, is this loss supplied? By an *under-current* of cold water constantly rushing into the Bay from the Lake between the end of the Queen's Wharf and the bar buoys. This is clearly proved, both by experiment and by resorting to the same means which put me in possession of the fact. I here dived at least an hundred times from a boat moored in the channel near the buoys, and when at the bottom with my eyes open I have *invariably* seen myself drawn inwards towards the Bay, nor can I call to mind a single instance where the under-current set outwards or in the opposite direction.

I am well aware that the surface or upper current will often run out of the Bay, while the under current is running in for this I have seen a minute after coming to the top of the water neither will I deny that occasionally, just after an easterly or south-east gale when the waters of the Lake are driven up towards its head, and when the Bay in common with the Lake partakes of this rise or after a strong S W blow, which produces the same effect, that this under-current may be overcome by the pressure of the increased quantity of water in the Bay, and that a reflux current may for a short time be established.

The form or shape of the bar immediately opposite the Queen's Wharf also proves the steady indraft into the Bay. I have always likened it to a man's foot; the shoal which runs from the N point of the Island, terminates suddenly near the spot where the red buoy is usually placed, thus I have compared to the heel the northern end of the bar runs parallel with the wharf and represents the sole of the foot, and the many sandy prolongations which run easterly may be likened to the toes.

To this natural cause, and to this alone the persistance of the channel at the Queen's Wharf is dependent do away with this current or lessen its force by another opening at the east end of the Bay, and in ten years' time the sand would gain such a mastery as to bid defiance to the dredge.

There are many other weighty reasons against making a canal at the S E end of the Bay... they are, however so ably set forth in Captain Richardson's admirable report, that it is quite unnecessary for me to allude to them.

Might it not be desirable to build a short pier of crib work, say two or three hundred feet long, parallel with the Queen's Wharf, and at whatever distance from it to the south that the Harbour Commissioners may deem sufficient for the width of the channel, and upon the ends of which lights should be erected?

This pier would not in any way interfere with the escape of ice in the spring, it would clearly indicate the width of the channel, and for which purpose the present buoys are perfectly inadequate at night and it could not have any injurious effect in causing the sand brought in by the wash of a S W wind from being deposited in any other situation than that in which it now takes place.

Should this suggestion not be deemed worthy of the consideration of the Harbour Commissioners, they should in common justice to all sailing vessels (more especially strangers) visiting this port, cause to be placed at the narrowest part of the channel on the end of the Queen's Wharf either a small beacon light (which might be lighted with gas), or a buoy fitted with bells, and which the action of the water alone would be sufficient to sound.

COURSES AND DISTANCES, FROM GIBRALTAR POINT,

Taken from the Admiralty Chart, surveyed by Capt Owen R.N

From Toronto to Burlington Canal (Hamilton) S W. 35 miles.
" " Port Dalhousie, S by E 33 miles.
" " Mouth of Niagara River, S E. by S. 35 miles.
(When on the bar bring the Fort Niagara to bear S. E by E)
" " Devil's Nose, E by S 86 miles
" " Genesee River (Rochester), to clear Braddock's Point, E by S ½ E 110 miles.
" " Oswego E ½ S 176 miles.
" " Long Point Light, E ½ N 136 miles.
" " Cobourg E N E ½ E. 78 miles
" " Whitby N E by E. 34 miles

No variation to be allowed for compass when within 20 m. E or W of Toronto

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THE PORT OF LIVERPOOL, OR PICKERING,

FORMERLY CALLED FRENCHMAN'S BAY

This Port is 26 miles N E ½ E. of Toronto. It is formed by a deep bay running into the land, and separated from the Lake by a sandy and gravelly beach, through which the Harbour Company have cut a Canal 100 feet wide.

HARBOUR LIGHT.

On the east pier there is a low miserable lighthouse, the light from which cannot be seen five miles in the Lake

The harbour itself is well sheltered, being completely land-locked, but from the foulness of the bottom (principally from weeds) an anchor will not hold during a hard blow

DEPTH OF WATER.

The average depth of water inside the bay is 9 feet 6 inches, at the outer mouth between the piers, 11 feet 6 inches, and at the inner mouth 7 feet 6 inches.

Through this canal a current runs in and out with great regularity once in about every four minutes.

WHITBY HARBOUR.

Six miles to the eastward of Liverpool and 34 miles N E by E of Toronto is the Harbour of Whitby, one of the best and most secure on the north side of the Lake. It stands near the centre of a deep bay, between Ruby Head on the E and Scarboro' Heights on the West, and three and a half or four miles north of line drawn between these two points

The harbour is formed by a strong breakwater of rip-rap or crib-work stretching across the head of the bay, by which it is separated from the Lake; thus is enclosed a capacious basin, the entrance to which is at its eastern extremity, between piers running south a considerable distance into the Lake, 250 feet apart, and with 13 or 14 feet water in the channel.

HARBOUR LIGHT.

The lighthouse is 12 feet high, built on the end of the west pier, (which extends a little further into the Lake than the east,) having a fixed white light, badly seen in approaching from the E. or W., but good from the southward.

TIDE.

A strong tide or current sets in and out of this harbour, which at times is so strong as to turn a vessel's head round when entering with a light wind.

On entering this harbour, blowing fresh from the S. S. E. or E. S. E., steer for the *Red Store House*, keeping as close to it as safety will permit; then luff your vessel sharply to the wind, back the topsails, to check her way, and anchor as indicated in the chart.

DANGER.

Midway between Whitby and Lavrpool there is a nasty shoal in shore, one mile W. of the township line.

COURSES AND DISTANCES.

From Whitby to Toronto, S. W. by W. 34 miles.
" " Burlington Canal, S. W. ¼ W. 70 miles.
" " Port Dalhousie, S. S. W. 55 miles.
" " Rochester (clear of Braddock's Point), E. S. E. ¼ S. 92 miles.
" " Oswego, E. by S. 155 miles.
" " Long Point Light, E. 107 miles.

OSHAWA.

The Port of Oshawa is 5 miles E. of Whitby. It is situated in the head of a small bay, and consists of a well constructed wharf, running out from the main land into 18 feet water.

LIGHT.

At the south end of the wharf there is a small store-house painted red, and under the angle formed by the roof, is placed a large lamp, which serves the purpose of a lighthouse.

This port is well secured from any wind north of E. or W., but badly exposed to the Southward of these points.

The west side of the bay of Oshawa is formed by a high clay bank, almost perpendicular towards the Lake, on the extreme point of which stand three or four trees.

DANGER.

The E point is called Oshawa Island, bearing S. by E from the wharf; the water here is very shoal, and a reef of large boulders extends into the Lake S. E for 300 or 400 yards, which must be given a wide berth.

From the point of land about midway between Whitby and Oshawa, there is another reef of large boulders running out E. S. E. into the Lake.

PORT DARLINGTON.

The Port of Darlington is 6 miles to the eastward of Oshawa, 50 miles E. N. E. of Toronto, and 29 miles W. by S. of Cobourg.

The Harbour Company have much improved this snug little port, by extending the piers into 12 feet water, and dredging the land locked basin within, where vessels drawing 9 feet or less may be in safety in any weather.

The W. pier extends about 50 feet farther south than the E. pier, whereby the roll of the Lake during a S. W. blow is materially broken.

LIGHT.

A lighthouse is erected on the E. pier; but, although the light is bright and good of, in common with most of the Harbour lights on the Canada side, is far too low to be seen at any great distance in the Lake.

RABY HEAD.

One and a half miles W. of Darlington is the high, perpendicular and bluff clay point called Raby Head. Near the Lake it is destitute of trees or bushes, but further back stands a farm house and barn, surrounded by several lofty poplars and other trees.

Neither the buildings or the trees can be seen from the Lake when due south of Raby Head.

Darlington is the Port of Bowmanville, from which it is distant two miles; the Grand Trunk Railway Station is within half a mile of this thriving harbour.

For Courses &c. see Bond Head.

BOND HEAD, OR PORT OF NEWCASTLE.

Between 4 and 5 miles E. by N. of Darlington is the Port of Bond Head. It consists of a wharf run out into 10 feet water; but from its exposed situation can only be approached in fine weather, or when the wind is off shore.

DANGER.

Four miles E. of this port there is a large boulder some distance in the Lake, called the Peach Stone, and 4 miles E of this again, there is a reef of boulders extending 200 or 300 yards into the Lake in a southerly direction, off a headland

COURSE.

In running from Darlington to Port Hope or Cobourg, steer E. ½ N for 18 or 20 miles to avoid these dangers giving the shore a good mile berth, then N E by E. ½ E. for Port Hope, and E. N E ¼ E. for Cobourg

PORT HOPE

Twenty-three miles E. ½ N of Darlington is Port Hope Harbour, which is formed by running two rows of piers or crib work out into 15 feet water, having a pond or basin at their inner or northern extremity.

During a South, S. E., or S W. gale, this Port cannot be made by large vessels drawing over 9 feet water with safety owing to the tremendous swell rolling in from the Lake, besides which the piers being only 125 feet apart at the mouth, and the basin very small, there is not room to check the speed of a vessel, or to sunb her, without danger to herself or others.

During a southerly gale, also, the swell in the basin is so great as to cause much injury to vessels by rubbing

From any wind N. of E. or W., however, this is a perfectly safe and snug harbour

LIGHT

The Lighthouse is built on the E pier,—a fixed white light.

DANGER.

See Cobourg.

COBOURG

The Harbour of Cobourg is situated seven miles east of Port Hope, and is formed very much in the same way A shifting bar of sand is thrown up during a S W. gale, which renders the entrance to it still more dangerous than Port Hope for vessels of deep draft. The Harbour is more capacious, and when once entered, more secure than that of Port Hope having a second or inner basin with plenty of water, where no sea can injure or disturb the vessels that lie therein.

The mouth of the harbour is 130 feet wide with water varying from 10 to 15 feet

LIGHTHOUSE.

The lighthouse is built on the E. pier, 20 feet in height the light is bright and good, and can be seen on a clear night seven or eight miles off.

DANGERS.

In entering this port, particularly at night, great care must be taken not to run too close to the south end of the west pier, where broken crib work and numerous piles project nearly 100 feet futher into the Lake than the end of the E pier

SHOAL.

Midway between Port Hope and Cobourg there is a dangerous shoal called Gull Island, which is about two miles long, and about one mile from the shore; it is sometimes bare, and has erected upon it a lighthouse 45 feet high having a bright fixed light, which on a fine night can be seen from ten to twelve miles.

When sailing between these ports, give the shore a good two miles offing and on no account attempt to pass between the lighthouse and the land.

VARIATION OF COMPASS.

When within 20 miles E. or W. of Cobourg, allow ½ a point W. for the variation of compass

REMARKS.

In running down the Lake from Hamilton to Long Point, there is nothing by which one harbour light can be distinguished from another with the exception of the red light on the Queen's Wharf, at Toronto, and this cannot be seen a mile or two south of Gibraltar Point. Would it not be desirable, therefore, in so important a port as Cobourg where all the steamers plying between the head of the Lake and Kingston are in the habit of calling, besides numerous sailing craft, to have its light coloured so as to distinguish it from all others? This could be done at an expense of a few pounds, by substituting stained glass, either blue, red, or green

COURSES AND DISTANCES.

Cobourg to Toronto W. S. W. ½ W. 78 miles.
" " Port Dalhousie S. W. ½ W. 90 miles
" " Burlington Canal S. W. by W. 113 miles
" " Rochester S. E. by S. 67 miles.
" " Oswego E. S. E. 105 miles
" " Long Point, E. ½ S. 61 miles.
" " Presqu' Isle Point E. by N. 24 miles.

GRAFTON.

The village of Grafton is about 8 miles E. of Cobourg having a wharf run out from the land in the Lake into 10 feet water

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COLBORNE.

Between 8 and 9 miles below Grafton is the village of Colborne, with its wharf for the accommodation of trading craft

Both these ports are exposed to the heavy seas of the Lake and afford no shelter to vessels except when the wind is off shore or to the northward of E or W The villages themselves being small they offer no inducement to the numerous Lake steamers to touch at their ports and which are frequented only by small schooners carrying wood, or in the fall of the year produce of different kinds.

DANGER.

One mile W of Colborne there is a projecting point of land called Ogden's Point, off which is a reef of boulders

In approaching the Port of Colborne from the Westward, care must be taken to give this point a wide berth

COURSES AND DISTANCES.

From Cobourg to Colborne, E by N 16 miles.
" Colborne to Presq' Isle Point E. by S 8 miles.

PRESQU' ISLE HARBOUR.

Twenty four miles E. ¼ N of Cobourg is the west or bluff point of Presqu' Isle, well wooded, and with 30 feet water within a short distance of the shore

LIGHTHOUSE.

Five miles N. E. by E. of this point will bring you abreast of the lighthouse, which is 67 feet high and upon which there is a very good fixed bright light, that can be seen in fine weather from 12 to 15 miles.

Immediately under the lighthouse to the southward, there is shoal water with boulders; but by keeping half a mile from the shore, the danger is easily evoided

CHANNEL.

The channel which leads into this fine harbour now becomes difficult owing to the shoals which surround it being entirely destitute of buoys or beacons to mark them

When making this harbour in the day time, steer to within ½ or ¾ of a mile S by E of the lighthouse; thence N by E for a very large and solitary *Pine Tree* which stands on the main land some distance from the shore (this object is so conspicuous as to render a mistake impossible) continue this course for a mile and a quarter, or until the range lights (in the harbour) are brought into line; then alter your course, and steer S W directly for the easternmost of the two lights.

HARBOUR LIGHTS.

At night, as the pine tree cannot so well be seen, steer N by E until the range lights are seen in line; then change your course steering directly for them (that is S W) keeping within fifty yards N of the point on which this range light is built, (or even nearer) as there is from 18 to 22 feet water directly under it. Having passed this point, anchor in the little bay between the two range lights

DANGERS.

1 Between the main lighthouse on the S. E. point and the range light on the N. E. point, extending in a north easterly direction for about ¾ of a mile, is a shoal called

the "*Middle Ground*," having only from 4 to 6 ft. water on it and formed of coarse grevel sand and mud. Captain Halbutt, who has traded to this port for many years, told me, that when the Lake is high he is in the habit of taking his schooner across this shoal, through a channel close to the two lights—his vessel, when laden, drawing 9 feet.

2 To the north of the lighthouse built on the N E point running out from the main land, there is a low, marshy spit, destitute of timber but easily recognised by a *large dead Elm tree* bearing due N of the lighthouse—from this point, extending west and south west, there is another formidable shoal upon which the *Pearsport* got ashore on 26th October, 1856.

I have called this, Elm Tree Point and Shoal—the channel between the beacon light, middle ground, and elm tree shoal is about ½ a mile wide.

3 W N W of the second range light, there is another small shoal called "*Four Acre Shoal*," nearly half a mile from the shore but with plenty of water all round it. The existence of this shoal renders it hazardous at night to stretch too far into the bay beyond the second range light.

4 Two miles E. S. E. of the main lighthouse, there is a dangerous rocky shoal in the Lake with only from 3 to 5 feet water upon it. It is to the eastward of the course steered from the lighthouse for the Scotch Bonnet, and one mile S E of this again there is another but smaller shoal.

These shoals would materially obstruct the entrance into Weller's Bay.

SCOTCH BONNET LIGHTHOUSE.

The Board of Works have just completed an excellent lighthouse on Big Island, or the Scotch Bonnet which is one mile S. S W of Nicholas Island. It was lighted for the first time in September, 1856. A bright fixed light, bearing S E of Presqu' Isle Light. Can be seen 13 miles.

REMARKS.

This nearly land locked bever of refuge, when once entered, is perfectly secure from every wind or sea—there is plenty of water with good holding ground—its dimensions are ample for the whole navy of the Lake—it is well lighted—it is easily entered with any wind except from the N W—and when it blows from this quarter, shelter is easily obtained in many other places—yet, from the want of a few beacons or buoys, vessels often keep the open Lake, or run for much less secure places rather than face the dangers of the shoals.

COURSES AND DISTANCES.

From Lighthouse to Presqu' Isle Point, S. W. by W. 5 miles.
" Presqu' Isle Point to Cobourg, W. ½ S. 24 miles.
" Lighthouse to Scotch Bonnet, S. E. 10 miles.
" Lighthouse to Genesee River, S. ½ E. 60 miles.
" Scotch Bonnet to Long Point, E. by S. 25 miles.

WELLER'S BAY.

The Underwriters, Forwarders, Shipmasters, and others interested in the navigation of Lake Ontario are about to petition the Government for the construction of a

Harbour at Weller's Bay, in the County of Prince Edward. An opening one hundred rods wide, with a channel one hundred and fifty feet wide and fourteen feet deep, has within a few years past, been made through the beach from the Lake to Weller's Bay, which is said to be capable of sheltering all the vessels which navigate Ontario. The entrance to the harbour of Presqu' Isle is difficult and frequently attended with casualties, and it is justly considered necessary to construct a harbour at the place mentioned, which the mariner can safely enter in a storm. Several vessels, as our readers know, were driven ashore within a few miles of Weller's Bay, or, rather the opening leading into it, which might have been saved, had the entrance been known to the masters.

There can be no doubt that the Government will entertain the prayer of the petitioners, and immediately take proper steps to erect a Harbour of Refuge to our fresh water seamen, that will serve to encourage them in their arduous and dangerous calling.

In fact, "it is the duty of Government to render every aid in facilitating and advancing the interests of marine investments, which contribute so largely to the revenue of the Province and the convenience of the people, and we feel confident the object will be acceded to without any circumlocution or useless delays."—*Kingston News* Jan. 7 1857

If the entrance to Weller's Bay was not rendered more dangerous than the entrance to Presqu' Isle Harbour, by the existence of the two shoals to which I have above alluded, the prayer of the petitioners would in all probability, have the favourable consideration of the Government; but the existence of these two formidable shoals at the very entrance of the bay exposed as they also are to the full sweep of the Lake, during a south or south west wind (the very winds which would render it necessary for vessels to run into Weller's Bay for shelter) would, I conceive, be an insuperable objection to the expenditure of so large a sum of public money as it would require to make that bay an efficient harbour of refuge during a dark and stormy night.

Far better would it be to petition the Government to expend one fourth of the sum in improving the entrance into Presq Isle and which is already well lighted. The shoals bad as they are, are so land locked and protected from the heavy surge of the sea, as hardly to endanger any vessel which might be so unfortunate as to get aground on them

The shoals opposite the entrance to Weller's Bay are rocky and have only from 3 to 5 feet water on them they are also so exposed, that any vessel running ashore on them during a gale must soon go to pieces

KINGSTON HARBOUR

Kingston Harbour next to the Bay of Toronto is the best natural harbour on Lake Ontario; the approach to it, however is intricate—consequently dangerous.

It is situated at the N. E. corner of Lake Ontario just where the Lake terminates and the River St. Lawrence begins.

CHANNELS.

There are three channels by which it may be made

1st. The Bateau Channel between Wolfe or Long Island and Simcoe or Gage Island this is generally used by small craft only, having in several places little more than two fathoms water

2nd. South Channel between Simcoe or Gage Island and Snake Island here, also, the water becomes shoal having only 2½ fathoms.

3rd. North Channel which is the best, it runs between Snake Island and the main Land which although it increases the distance a little, is by far the safest, having from 4 to 10 fathoms water in it.

From South Bay Point in Prince Edward's District on the west, to Stoney Point in New York State on the east, the navigation of the Lake is interrupted by numerous islands, shoals, and rocks, which renders the approach to Kingston Harbour dangerous to vessels unacquainted with it.

SOUTH CHANNEL.

In making this harbour from any of the western ports of the Lake steer for the Mid Channel between the Real and the False Ducks, then alter the course to N E ½ E, which will take the vessel through the south channel direct to Kingston Harbour

Should there be a head wind, make this course the base line, never passing it to the southward, but stand off and on to the northward and eastward until inside Nine Mile Point on Simcoe Island, keep close to Four Mile Point, (on Simcoe Island) leaving Snake Island which may be known by a single tall elm tree, and upon which the Board of Works are about to erect a lighthouse,) bearing N W or to the left from thence the course is clear to Kingston.

In running along Simcoe Island from Nine Mile Point Lighthouse* to Four Mile Point, do not follow the curve of the island, as the water becomes very shoal.

NORTH CHANNEL

Should the North Channel be preferred, when inside Nine Mile Point Lighthouse, steer due North till midway between Snake Island and the main land this course will clear a shoal bearing N. W of the lighthouse and give Snake Island a good half mile berth to the eastward thence due east into the harbour

In making Kingston from Oswego, two courses may be taken Due N will take you to Nine Mile Point clearing the Ducks, leaving them to the westward and Pigeon Island and Charity Shoal to the eastward

North by West (which is the best course) will take to mid-channel between the True and False Ducks

DUCKS LIGHT

At night the stationary bright light of the False Ducks will be first seen, but in the day time South Bay Point, which is high bushy land, will be seen before the Ducks.

SOUTH BAY POINT

Should a gale be coming up from the W or S W. good anchorage and shelter can be obtained inside South Bay Point to make it, keep to the eastward of the Outer Drake Island and to the north of the Inner Drake (the False Ducks) and anchor off the N E point, or run alongside a small wharf which will be found there

UPPER GAP

If obliged to run for shelter behind South Bay Point, Kingston may afterwards be made by passing through the Upper Gap, that is, between Indian Point on the West,

* The Lighthouse on Nine Mile Point is 45 feet high, and furnished with a good stationary bright light.

and Amherst Island to the East. Steer N by E. till between Amherst Island and the main land, then E. N. E till North of the Brothers, thence E to Kingston

REAL DUCK.

Shelter and good anchorage can also be obtained inside or to the N E of the Real Duck Island.

NOTE.—There is a channel between South Bay Point and the Outer Drake, which, however should not be attempted except with a leading wind, in fine weather, and by a good pilot, as a dangerous shoal exists between this island and the point

COURSES AND DISTANCES

Kingston to Snake Island, S. W by W, 4 miles
" Nine Mile Point S W by S., 8½ miles.
" Mid Channel between True and False Ducks S W ½ W 27 m
Nine Mile Point to South Bay Point S. W by W 26 miles
" W end of Galloo Island (Lighthouse) S by E ½ E 23 m
Mid Channel between Ducks to Long Point W S W 25 miles.
" Oswego, S. by E. 40 miles.
" " Genesee S. W 75 miles
" " Port Dalhousie W S. W 105 miles
From Long Point Light to Toronto, W by S. 136 miles

SACKETT'S HARBOUR

I have not visited this Harbour and I have experienced some difficulty in obtaining authentic information respecting it that which is here given however, can be relied upon

It is not a port of so much importance in a mercantile point of view as many others, although, from the great depth of water in the bay its secure and sheltered position, and tolerably easy access it should be ranked amongst the best on the Lake. These recommendations, together with its capabilities of being strongly fortified have induced the Government of the United states to make it their Naval Depot or Arsenal

SITUATION

It is situated on the south shore of Black River Bay an arm of the Lake running several miles inland, having point Peninsula bearing W by N about nine miles. Great Stoney Island and Great Galloo Island, bearing W by S eleven and fifteen miles respectively

LIGHTHOUSE.

The lighthouse is built on a rock called Horse Island at the South-Western point of Black River Bay, one and a half miles W. of the Harbour it has a good fixed bright light. The lighthouse on the Galloo Island is at its S. W end bearing W. by S ½ S. distant 21 miles

B

In making this harbour from the westward, steer for the mid-channel between the Ducks and Galloo Island, thence E by N direct into the bay, midway between the light on Horse Island and Point Peninsula.

From Oswego, N. ½ E for Galloo Light, and when well to the north of the Island, E. by N as before

From Kingston after passing Nine Mile Point on Simcoe Island two courses may be taken 1st S by W. for about ten miles until south of Charity Shoal thence E S E 15 miles till abreast of Point Peninsula, thence E into the harbour; or 2nd if the wind be favourable, after passing Nine Mile Point, steer S. E 25 miles till off Point Peninsula, thence E as before This course will leave Pigeon Island and Charity Shoal well to the westward.

There are other channels by which this harbour may be made in fine weather or under the guidance of a good pilot, but they are more intricate and dangerous than those laid down.

Black River Bay is clear of shoals or rocks with depth of water sufficient for vessels of the largest size

COURSES AND DISTANCES.

From Sackett's Harbour to Light on Horse Island, W by S 1½ mile
" " Point Peninsula, W by N 9 miles
" " N E point of Great Galloo Island W by S 15 m
" " N E point of Great Stoney Island, W by S 11 m
" " S E point of Ducks Island W ½ S 25 miles
" " Long Point Light W by S 60 miles
From Horse Island Light to Stoney Point Light, S W by W 12 miles.

CAUTION

Nearly mid-channel between Stoney Point and Great Stoney Island there is a shoal with only seven feet water —

From Stoney Point to the False Ducks passing to the Southward of the Great Galloo Island, W by N 32 miles.
From the N E. end of Stoney Island to the W end of Grenadier Island N N W 11 miles.

CHARITY SHOAL.

From Nine Mile Point to centre of Charity Shoal, S by E 9 miles
" Great Galloo Light to do. N by W 13 miles
" Horse Island Light to do W N W 22 miles
" Anchorage at Real Ducks to do N E by N 12 miles
" Ducks Lighthouse to do. E N E 20 miles.

PIGEON ISLAND

From Pigeon Island to Nine Mile Point Light N 7 miles
" " Charity Shoal, S E by E 3½ miles.
" " Galloo Light, S S E 16 miles.
" " Horse Island Light E S E 26 miles.
" " Point Peninsula S. E by E ½ E 18 miles
" " Ducks Light, S. W by W 18 miles.
" " Anchorage at Real Ducks, S S W 12 miles

PORT ONTARIO.

Twenty miles N. E. by E. of Oswego and N. of Mexico Bay is Port Ontario on Salmon Creek, a place of no considerable importance, yet possessed of a good harbour, which is entered between piers running W. N. W. a considerable distance into the Lake.

LIGHT.

The Lighthouse is on the N. pier end, is 52 feet high, having a fixed bright light.

The land both north and south of it is very low, and cannot be seen at any great distance; there is, however, good depth of water in every direction.

I have not been into this port, and have been unable to obtain reliable information as to the soundings inside the harbour.

OSWEGO HARBOUR.

This excellent Port is in a great measure reclaimed from the Lake by skilful engineering, and at an enormous expense. It is situated at the mouth of the Oswego River, and protected from the heavy seas caused by westerly and north west gales by walls of solid masonry.

Capacious as are the basins, slips, and other parts of the harbour, they are even now barely sufficient for the accommodation of the numerous steamers, propellers, and schooners, which bring their valuable cargoes from all parts of the Upper Lakes to this busy and prosperous city.

The enterprising merchants and citizens of Oswego, aware of the magnificent accommodation afforded to the shipping visiting their port, are now engaged in devising plans for the enlargement and improvement of this important harbour; amongst these may be mentioned—

1st. The construction of a pier from a point 1½ miles west, to a point north of the lighthouse, 800 or 1,000 feet in the Lake.

2nd. A similar harbour east of the river and north of the Fort.

3rd. The construction of a lock to admit vessels into the pond above the dam, 500 feet wide, and one mile long.

The river Oswego has its source very near the head of the Mohawk; it passes through Lake Oneida, and in its course to Lake Ontario receives the Seneca River, besides the waters of several less streams and many small lakes. The waters from these in the spring and fall of the year so greatly swell and increase its current, that sailing vessels are unable to stem it, except when favoured by a strong northerly breeze.

To obviate this difficulty, numerous small but powerful tug boats are constantly plying about the mouth of the harbour, and when a large and heavily laden schooner comes within a mile or so of the port, they run out, seize upon their helpless prey, and conduct it alongside the wharf or warehouse to which it may be consigned with as much ease and precision as a carriage can be driven up to a street door.

There are no rocks or shoals to be feared in approaching this port the only dangers consist in the very heavy sea which rolls into the harbour during a westerly blow, and the want of room to manœuvre or work a vessel when inside

LIGHTHOUSE

The lighthouse is built on the west pier is 82 feet high and has a very good bright fixed light

COMPASS

When within twenty miles East or West of Oswego allow 1° or 1° 30′ West for variation of compass

COURSES AND DISTANCES.

From Oswego to Kingston.—Due N will take inside Real Ducks to Nine Mile Point on Simcoe Island, which has a fixed light 56 miles

N by W, which is the best course will take to the light of False Ducks, 46 miles, then N E ½ E for Kingston Harbour 30 miles.*

From Oswego to Big Sodus Bay W S W ½ S 32 miles.
" Genesee River, W by S ½ S 46 miles
" Port Dalhousie W till abreast of Thirty Mile Creek then S. S. W 164 miles.
" Toronto W ½ N 172 miles
" Cobourg, W N W 105 miles.
" Long Point, N W ½ W 48 miles.

LITTLE SODUS BAY.

About sixteen miles S W of Oswego is Little Sodus, an inlet or bay of considerable extent, and with depth of water sufficient for the largest class vessels that sail on the Lakes Unfortunately, however the water in the channel does not exceed an average of six feet, so that this otherwise secure basin is almost useless

The entrance is between piers 250 feet apart, run out 1300 feet in the Lake into fourteen feet water The depth of water inside the bay ranges from twenty-five feet to forty feet. There is no lighthouse.

BIG SODUS BAY

Thirty two miles W S W ½ S of Oswego, and thirty-six miles E ½ N of Genesee River is Big Sodus Bay, the most capacious and best harbour on the south shore of Lake Ontario.

It is entered from the Lake by a channel 470 feet wide, between piers which extend out into thirteen feet water

* In the daytime, when steering for the False Ducks the high bushy land of South Bay Point will be seen before the lighthouse, but at night, the light will be visible first.

HARBOUR LIGHT

The pier on the W. side is 1,200 feet long, and has on its northern extremity a fixed bright beacon light: that on the E. is nearly 1 000 feet long.

The average depth of water in mid-channel is ten feet, but immediately on entering the bay, the depth increases from twenty-five to 40 feet, with good holding ground.

Should the wind blow heavily from the northward, round the wooded and bushy spit marked P in the Chart, and anchor where indicated: here the vessel is protected from every wind or sea.

LIGHTHOUSE

The lighthouse, which is 56 feet high, is built on a hill about three-quarters of a mile due W. of the beacon light on the pier end. It is a good revolving light easily seen ten or twelve miles in the Lake.

This picturesque and fine harbour runs south or into the land for about six miles, and in its widest part is upwards of three miles. It is but little frequented, being used principally for ship building purposes: the timber, however, is nearly exhausted.

Several small islands are situated at the upper or S. end of the bay, and a village, where provisions can be obtained, is reached by following the crib-work on the west side towards the lighthouse.

CURRENT

A strong current sets out of the bay about 2½ knots.

COURSES.

Brown's Point bears W. by N. 8 miles, and Nine-mile Point (west of Oswego) E. N. E. ½ N. 23 miles.

Note.—This port cannot be mistaken at night, as it has the only revolving light between Port Dalhousie and Oswego.

GENESEE RIVER

The port of Genesee, leading to the City of Rochester, is situated on the W. side of the embouchure of the Genesee River.

It is protected from the violence of the Lake gales by piers about 2 000 feet long, running N. E. and S. W. into the Lake, and 400 feet apart. The river is narrow and tortuous, rendering it difficult to beat up; but the wharves, when once reached, afford every accommodation and shelter.

LIGHTS.

The beacon light is on the end of the W. pier, the range or main lighthouse is 83 feet high, and built on the hill side, these must be brought in line to shew the direction of the west pier. Both these lights are bright and stationary.

In making this port from the westward bring the pier light to bear S. S. E. and in running into the harbour keep the pier light a little more than a vessel's length to the eastward of the lighthouse.

DANGER.

About twenty feet off the end of the W pier there are some piles and a sunken crib, which must be given a wide berth

NOTE.—In Owen's and Herbert's Charts, a shoal having only eight feet of water is laid down, midway between Braddock's Point and the pier ends This supposed danger has no existence, there being plenty of water everywhere to within a short distance of the shore

COURSES AND DISTANCES.

From Genesee River to Presqu' Isle, N ½ W 60 miles.
" " Mid-channel between Real and False Ducks N E 75 m
" " Galloo Island Lighthouse N E ½ E 87 miles
" " Oswego E by N ½ N 66 miles.
" " Braddock's Point, N W by W 10 miles.
From Braddock's Point to Port Dalhousie first W by N till opposite Oak Orchard Creek, then W by S 90 miles.
" " Toronto, W by N ½ W 110 miles.
" " Cobourg, N W by N 67 miles

COMPASS.

When off Rochester, allow 1° for variation of compass.

OAK ORCHARD CREEK.

From the mouth of the Genesee River to the mouth of the Niagara River, there is not a port or harbour where a vessel drawing six feet or upwards can enter, the only boat harbour being Oak Orchard Creek, 35 miles W of Rochester and 52 miles E of Niagara

The entrance to the Creek is between two piers running N and S. into 6 feet 6 in water, and 160 feet wide The west pier is 844 feet long the east 734 feet the basin or pond within has plenty of water and is well secured

There is no lighthouse or wharf light

NIAGARA RIVER.

The waters from all the Upper Lakes, after coming over the falls of Niagara, descend the river for about seven miles in a rapid and turbulent manner as far as Queenston the stream there becomes wider and deeper, and admits of free navigation for vessels of any size, until it empties itself into Lake Ontario, at a point S E by S of Toronto, 87 miles W of the Genesee, and 12 miles to the eastward of Port Dalhousie.

At its mouth this river is about 1000 yards across, with from 20 to 40 feet water, and consequently it affords an easy entrance for shelter, and good anchorage during a storm

The town of Niagara is a mile S of Fort Missassaga, on its W. bank, where there are extensive wharves; and the village of Youngstown, which is nearly opposite Niagara on the east side has also good wharves and accommodation for shipping

LIGHTHOUSE

The lighthouse is 78 feet high and placed on the top of Fort Niagara, which is built on the E. side of the mouth of the river It has a bright stationary light, which can be seen ten or twelve miles off.

On entering this river, keep near its centre, and bring Fort Niagara to bear S E. by E. When W or W by S. of the Fort, the shores become bold, and may be approached to within a short distance especially on the E side.

With a northerly wind meeting the current, there is a short chopping sea on the bar

DANGERS.

Extending into the Lake for about a mile N W of Fort Niagara is a shoal with only six feet of water on it, and under Fort Missassaga on the W bank there is another shoal, extending E N and N W.

COURSES AND DISTANCES.

From Niagara River to Port Dalhousie, W by S 12 miles
" " Burlington Canal W ¼ N 42 miles.
" " Oakville, W N W 38 miles
" " Toronto, N W by N 35 miles.
" " Cobourg, N E 80 miles.
" " Long Point, E. N E. 126 miles
" " Mid Channel between Real and False Ducks E N E ½ E

PORT DALHOUSIE.

To sailing vessels, this is without doubt the most important Port on the Lake. Every vessel bound to or from the Upper Lakes is obliged to pass through the Welland Canal and consequently to enter or leave this Port. It has the advantage of being easily made in any weather and with any wind.

LIGHTHOUSE.

It is furnished with an excellent Lighthouse, built on the end of the east pier containing a *revolving bright light*

There are no shoals or dangers of any kind to be feared in approaching Port Dalhousie the only caution requisite for a sailor, is to guard against standing inside

the range of the West Pier in working in, as between it and the remains of an old wharf there are two rocks and a shoal (all below water) on which he would put his vessel ashore. The piers run N. and S. to the head, thence to the lock N. E. and S. W.; they are about 3,000 feet long, 200 feet apart, with an average depth of 12 feet water. The basin or pond to the east of the steam boat landing is too shoal to be of any service, and it reflects no little discredit upon the Commissioners for allowing so much valuable space to be lost, when at a comparatively small cost the capacity of this important port could be so greatly improved.

It has been told me as a fact, that between three and four miles N. or N. by W. of the lighthouse, the compass dips, and for a short time becomes so disturbed as not to be relied upon. I have not been able to verify this, but shall feel much obliged to any of the Captains frequenting this Port, communicating to me the result of their experience.

COURSES AND DISTANCES

From Port Dalhousie to Burlington Canal W. ¾ N. 32 miles.
" " Oakville N. W. by N. 22 miles.
" " Toronto, N. by W. 33 miles.
" " Whitby N. N. E. 55 miles.
" " Long Point E. N. E. 136 miles.
" " Mid-channel between East and False Ducks, E. by ½ N. 174 miles.
" " Niagara River E. by N. 12 miles.
" " Devil's Nose, E. by N. ½ N.

PORT OF HAMILTON & BURLINGTON CANAL

The Port of Hamilton occupies the extreme Western end or head of Lake Ontario, it is separated from the Lake by a long low ridge of sand and gravel, resembling the Peninsula opposite Toronto. This ridge stretches across from the northern to the Southern Shore in a S. S. E. direction converting that portion which is to the west into a large bay, called Burlington Bay, the entrance to which is by means of a Canal upwards of half a mile long, with an average width of 200 feet.

Unlike most canals, or piers entering a harbour, the width is not uniform, the entrance from the Lake being its widest part, that into Burlington Bay its narrowest, the former is 225 feet wide, the latter 130, while at the ferry (or about its centre) it is 150 feet across. During the year 1856 several alterations and repairs have been made. Additional crib-work has been added to the eastern or Lake extremity of the South Pier, 300 feet in length, and considerably higher than the old work. Instead of following the old line, or N. E. ½ E. the new part runs a more northerly course, or nearly N. E. by N., which has had the effect of making the entrance still more difficult than it was before, particularly when the wind is strong from the east or south.

I have heard from persons residing on the spot, that it is next to impossible for sailing vessels to enter this canal during a gale from the E. or S. E. without coming in contact with the end of the north pier, whereby the weaker of the two is likely to be seriously damaged; to obviate the catastrophe, however, several oak piles have been

driven into the bottom, which serve the purpose of a fender, and materially lessen the concussion that would otherwise take place

The same wise arrangement has been made at the opening into the bay, except that the new work is added to the north pier, and the fenders to the south.

The old lighthouse which stood near the centre of the canal on the isthmus was destroyed by fire, and a new one has been erected on the east end of the south pier, with a stationary bright light, the old beacon light not being used.

The depth of water at the entrance from the Lake is variable, owing to a deposit taking place during an easterly or south-east blow... it is, however, never less than eleven feet

Burlington Bay is upwards of five miles long, and about three miles wide, with from twenty to forty feet of water, except near its edges There is good holding ground immediately inside the canal.

COURSES AND DISTANCES.

From the Canal to Toronto, N. E 35 miles.
" " Whitby N E ½ E 70 miles
" " Niagara River, E. ½ S 42 miles
" " Port Dalhousie, E. ½ S 62 miles

OAKVILLE

The Port of Oakville is 22 miles W ½ S of Toronto, and 14 miles N E. by N of Burlington Canal.

The piers, which are about 100 feet apart, run nearly N and S in the Lake, into twelve feet water Within there is a basin, which if properly dredged would afford excellent shelter and accommodation to a large number of vessels As it now exists, there is little more than a channel by which schooners of 200 tons are enabled to run up to the storehouse to load or unload.

LIGHTHOUSE.

The lighthouse is built on the East Pier; although forty feet high, it is so bad as to be scarcely visible six or seven miles in the Lake.

DANGERS.

Between this port and Port Credit there is a shoal, and numerous large boulders extend a considerable distance out from the shore, which should not be approached nearer than a mile

COURSES AND DISTANCES.

From Oakville to Toronto N. E ½ E 22 miles
" Burlington Canal, S. W. by S 14 miles
" Port Dalhousie, S E by S 32 miles.
" Niagara, E. N. E. 40 miles
" Devil's Nose E ½ S 100 miles.
" Long Point E. by N 155 miles.

PORT CREDIT.

This port resembles Oakville in its construction, the piers being run out into deep water the pond or basin within is large and would accommodate a large fleet of schooners the want of a dredge, however renders it almost useless This port is 12 miles S W by W of Toronto and 10 miles N E by N of Oakville.

LIGHTHOUSE

The lighthouse is on the E pier low and bad and not even lighted with that regularity which the safety of vessels trading to the port absolutely demands.

WELLINGTON SQUARE, AND NELSON OR BRONTE.

These small ports are situated between Oakville and the Burlington Canal. Their wharves run out into ten feet water but from their exposed situation except when the wind is off shore, they are rarely visited, except by the smallest class of coasting vessels.

PORT BRITAIN.

Having been favoured by J Morrell, Esq, the President of the Port Britain Harbour Company with a detailed account of the works now in progress and having received a copy of the Report drawn up by E G O'Brien, Esq and Captain Weatherley, for the President and Directors of the Company, it affords me great pleasure to be able to lay before the public an authentic account of this excellent Harbour of Refuge.

I am also indebted to Messrs Armstrong Hime, and Boore, for an excellent Photographic Plan of the Harbour of which I have availed myself

Port Britain is situated in the centre of the Township of Hope, in the County of Durham, about sixty miles to the eastward of Toronto, four miles west of Port Hope, and nearly opposite the City of Rochester

The great advantages to be derived from this Harbour will arise from the splendid anchorage afforded by a blue clay bottom entirely free of boulders, which is not to be attained to the eastward of this port, and which under any extremity will form a safe and secure refuge for all vessels navigating the Lake, protected as it is by the bluffs both to the eastern and western limits of the harbour, and will thus form a shelter for any vessel in the almost impossible event of her inability to obtain the shelter of the piers or harbour itself

The Inner Harbour will be formed by the natural basin, having an area of about 15 acres, with 12 feet depth of water; and the Outer Harbour will be formed by piers extending about 700 feet from the shore into the Lake 300 feet apart at the entrance, with 14 feet depth of water, enclosing a surface of six acres and thus available to vessels of any draught navigating the Lakes. There will also be lights on both pier ends

The progress of these works has been so rapid that the outer harbour will be accessible to vessels by the middle of June, and I am informed that a portion of the inner harbour will be completed so as to afford every accommodation to shipping for the fall trade.

It is not, however the intention of the Company to complete the whole of the inner harbour immediately their principal object being to ensure a secure Harbour of Refuge extensive enough to meet the present exigencies of commerce, leaving the completion of the work, until such time as the rapidly increasing trade of the country may require.

Extracts from the Report of E. G. O'Brien Esq. and Captain Weatherley

"I first directed my attention to the anchoring ground, both outside and within the intended basin, good holding ground being essential to a harbour of refuge and without which no place can be safely used as a trading port. This condition of a good harbour I found fulfilled more satisfactorily than I anticipated * * *

* * * The bottom, both outside and within, as it will be when cleared out to a depth of about fifteen feet is a clay and as far as I could ascertain, free from boulders, making the best holding ground possible. The construction of the harbour, as shown by the plans I consider preferable to any of the artificial ports which I have seen, being not only more safe, but much larger than any other on that part of the coast of Lake Ontario. Opening wide east and west within it allows the entrance between the piers extending south into the Lake to be made more direct and wider than would otherwise be safe and again the piers protecting this entrance, diverging from each other as they approach the inner harbour, give the wave rolling in, room to spread, and thereby lessen its force

For all commercial purposes it possesses the great advantage of ample room for wharves stores, ship yards, or lumber yards, with the GRAND TRUNK RAILROAD running along its entire length, and accessible at all points

The whole is surrounded by an amphitheatre of rising ground, at such a distance as to allow the freest circulation of air and at the same time afford sufficient protection from westerly, northerly, and easterly winds

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EXTRACT

FROM

"AN ACT TO COMPEL VESSELS TO CARRY A LIGHT DURING THE NIGHT, AND TO MAKE SUNDRY PROVISIONS TO REGULATE THE NAVIGATION OF THE WATERS OF THIS PROVINCE."

14 & 15 Victoria, Chap 126.

Passed August, 1851.

1 * * * * * * And it is hereby enacted by the authority of the same That all Steamboats whether propelled wholly or in part by steam while navigating the waters of Upper Canada shall be provided during the night with lights to be exhibited and affixed as follows:—

When under weigh—a white light on flag-staff aft, a bright white light on the foremast head a green light on the starboard bow, a red light on the port bow to be fitted with inboard screens

When at anchor a common bright light at foremast head as illustrated and explained in the Schedule A

That Schooners and other sailing vessels shall be provided during the night with lights, to be exhibited and affixed as follows:—

When sailing before the wind, a pale light,
When sailing on the starboard tack a red light, } on the Pawl bit, or Knight head
When sailing on the larboard tack a green light,
When at anchor a pale light in the foremast rigging

Sailing Vessels running before the wind or with the wind free, and making a Steamer's light dead a-head, shall pass on the starboard side but if to avoid piling them aground or for any other good reason they shall wish to pass on the larboard side, then shall show their green light, indicating that they are on the larboard tack, when the Steamer will pass under the Vessel's stern

In case of two Sailing Vessels approaching one another on opposite tacks the vessel on the starboard tack shall keep the wind and the one on the larboard tack shall keep away always when tacking ship at night, shifting the light.

A Vessel in distress shall show both red and green lights.

2 And be it enacted That any such Steamboat, Schooner or Vessel as aforesaid shall be provided with a *Fog Horn* or a *Bell* of a weight not less than twenty pounds, which it shall be the duty of the Master or person commanding such Steamboat, Schooner or Vessel under the penalty in the seventh section of the said recited Act contained to cause to be sounded or rung at regular intervals of not less than five minutes at a time with an intermission of two minutes during the time that any such steamboat, schooner or other vessel as aforesaid shall be in a fog

* * * * * * * * * * *

11 And be it enacted, That if any damage to any person or property shall be sustained in consequence of the non-observance of any of the provisions contained in this Act the same shall in all Courts of Justice be deemed in the absence of proof to the contrary, to have been caused by the wilful default of the Master or other person having charge of such Steamboat, Schooner or other vessel as aforesaid and the owner thereof in all civil proceedings and such Master or other person in all proceedings, whether civil or criminal shall be subject to the legal consequences of such default

12. And be it enacted, That the penalties imposed by this Act may be sued for by information or notice of debt in the name of Her Majesty in any Court of Record of competent jurisdiction, and one-half of such penalty shall be paid to the informer

SCHEDULE A.

The following Diagrams are intended to illustrate the working of the Plan prescribed by this Act

FIRST SITUATION

In this situation the Steamer A will only see the *red* light of the vessel B in whichsoever of the three positions the latter may happen to be because the *green* light will be hid from view A will be assured that the larboard side of B is towards him, and that the latter is therefore crossing the bows of A in *some direction to port*. A will therefore (if so close as to fear collision) *port* his helm with confidence, and pass clear On the other hand the Vessel B in either of the three positions will see the *red*, *green*, and *mast-head* lights of A appear in a triangular form by which the former will know that a Steamer is approaching *directly* towards him B will act accordingly

It is scarcely necessary to remark, that the *mast-head* light will be always visible in every situation till abaft the beam.

SECOND SITUATION

Here A will see B's *green* light only which will clearly indicate to the former that B is crossing to starboard. Again, A's *three* lights being visible to B, will apprize the latter that a steamer is steering directly towards him

THIRD SITUATION

A and B will see each other's *red* light only the screens preventing the *green* lights being seen Both vessels are evidently passing to port.

FOURTH SITUATION

Here a *green* light only will be visible to each, the screens preventing the *red* lights being seen. They are therefore passing to starboard.

FIFTH SITUATION

This is a situation requiring caution the *red* light in view to A, and *green* to B will inform both that they are approaching each other in an oblique direction A should put his helm to *port*, according to the standing rule mentioned in the next situation

SIXTH SITUATION

Here the two coloured lights visible to each will indicate their direct approach towards each other In this situation it ought to be a *standing rule* that both should put their helms to *port*

ROYAL HUMANE SOCIETY'S DIRECTIONS

FOR THE

RECOVERY OF THE APPARENTLY DROWNED

CAUTIONS.

Avoid all rough usage.—Never hold the body up by the feet.—Nor roll the body on casks.—Nor rub the body with salt or spirits.—Nor inject tobacco smoke or infusion of tobacco.

METHODS OF TREATMENT

1 Support the body carefully, with the head and shoulders in a raised position.

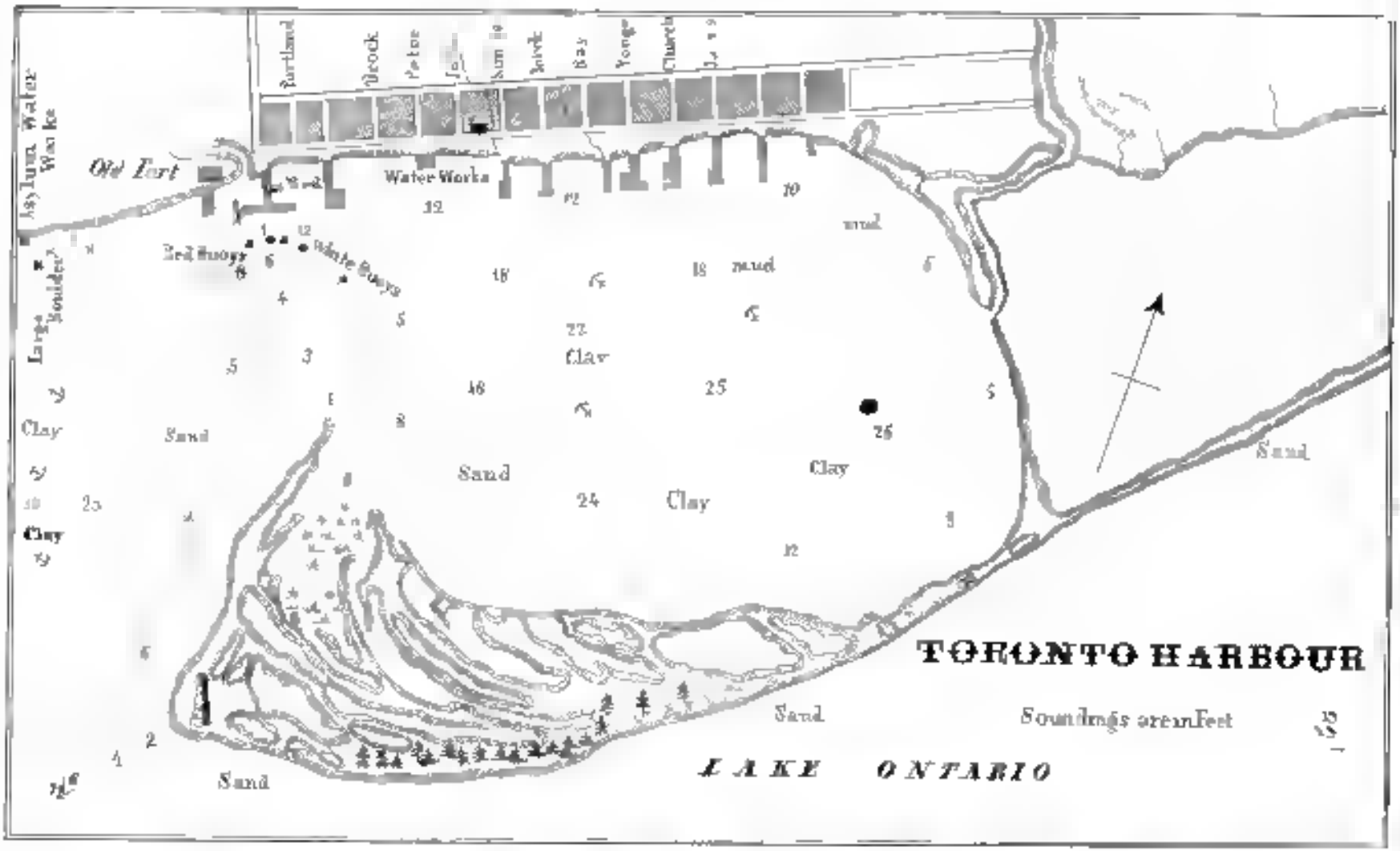
2 Strip the body, and rub it dry; then wrap it in hot blankets, and place it in a warm bed.

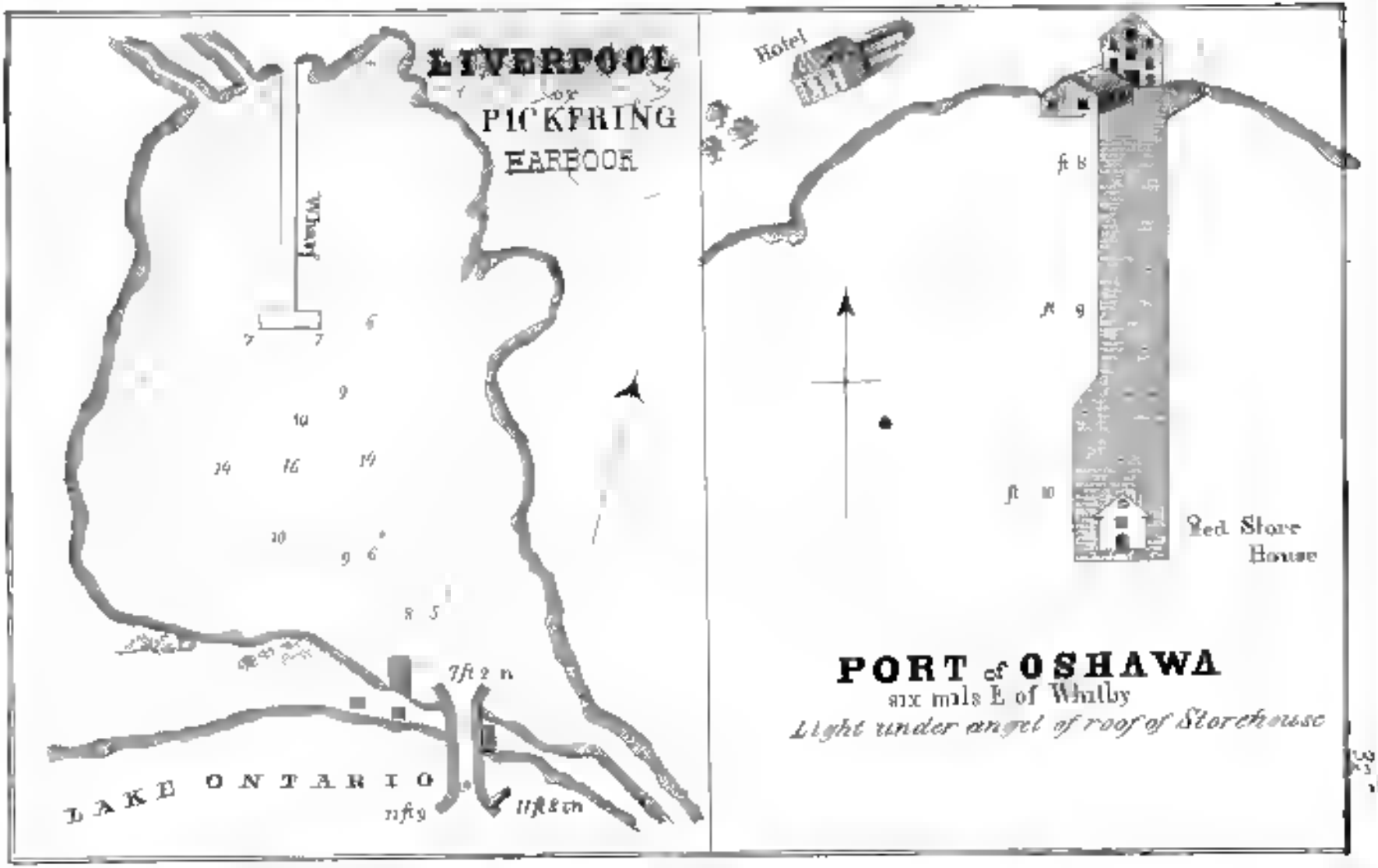
3 Wipe and cleanse the mouth and nostrils.

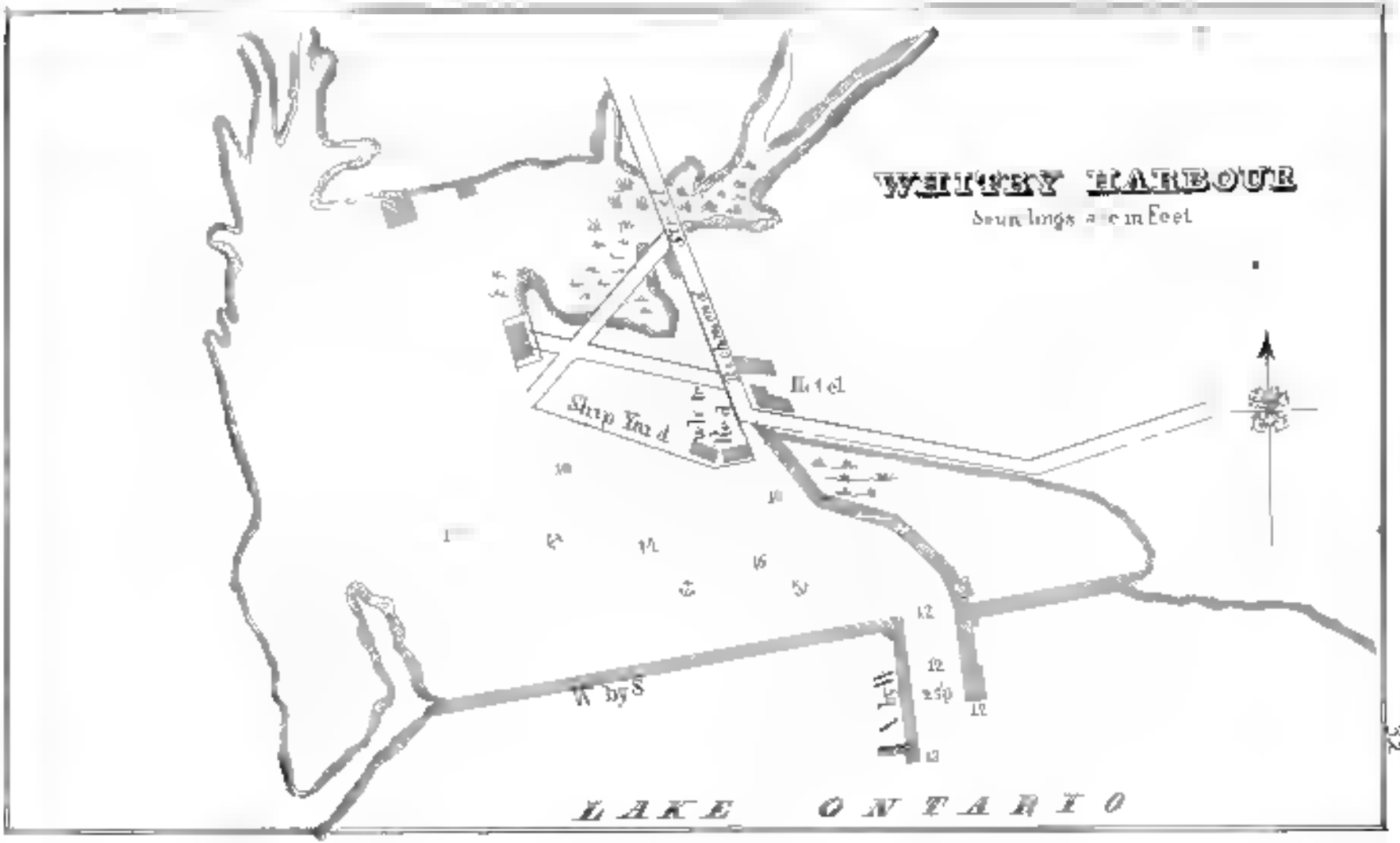
4 In order to restore the natural warmth of the body.—Move a heated covered warming pan over the back and spine.—Put bladders or bottles of hot water or heated bricks to the pit of the stomach, the arm pits, between the thighs, and to the soles of the feet.—Foment the body with hot flannels; but, if possible.—Immerse the body in a warm bath as hot as the hand can bear without pain, as this is preferable to the other means for restoring warmth.—Rub the body briskly with the hand; do not however suspend the use of the other means at the same time.

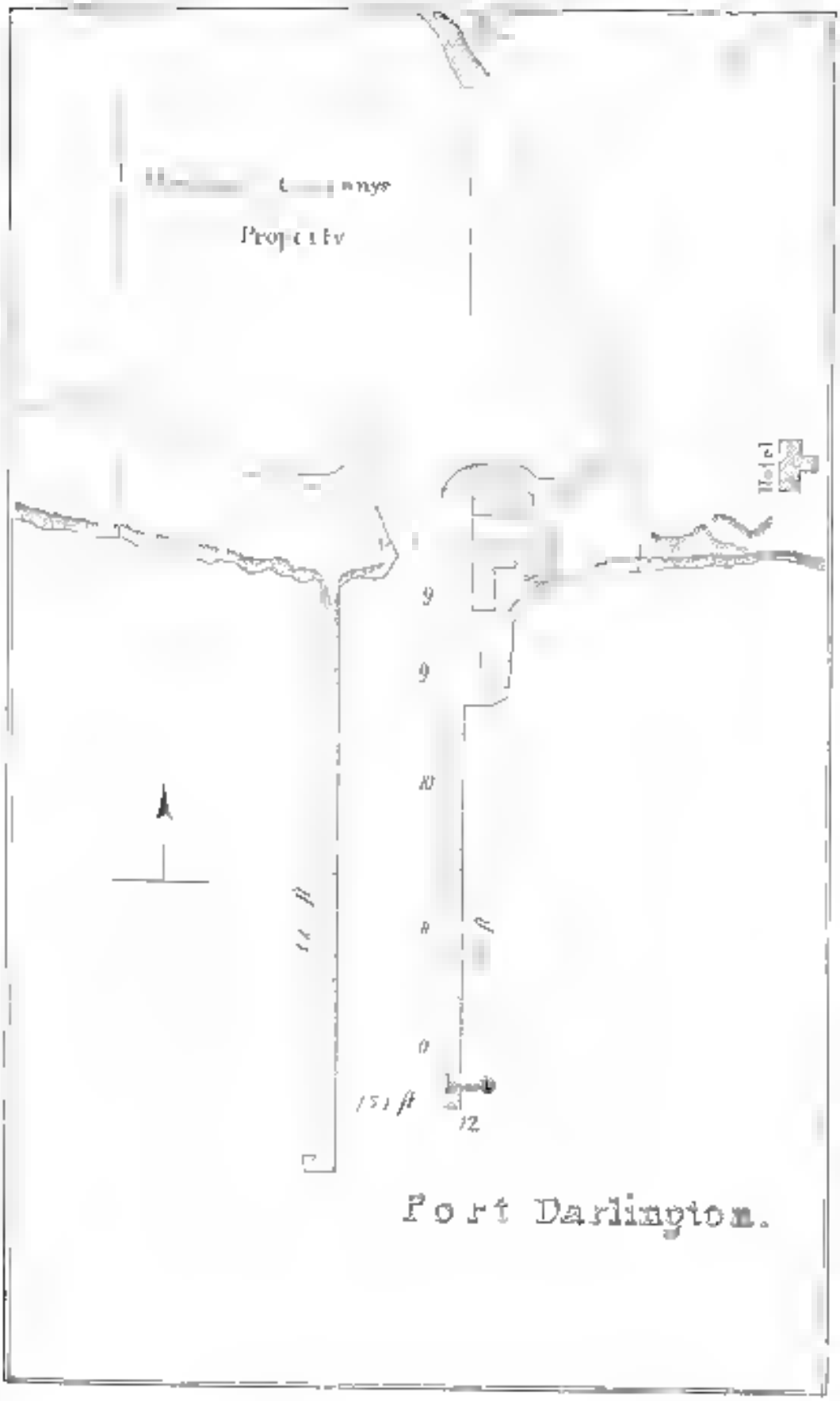
5 Apply sal volatile or hartshorn to the nostrils; if the power of swallowing be returned, small quantities of wine, wine or weak brandy and water may be given; the patient should be kept in bed, and a disposition to sleep encouraged. Great care is requisite to maintain the restored vital actions, and at the same time to prevent undue excitement. The treatment is to be persevered in for three or four hours. It is an erroneous opinion that persons are irrecoverable because life does not soon make its appearance.

MACLEAR, THOMAS & CO., PRINTERS, KING STREET EAST TORONTO.

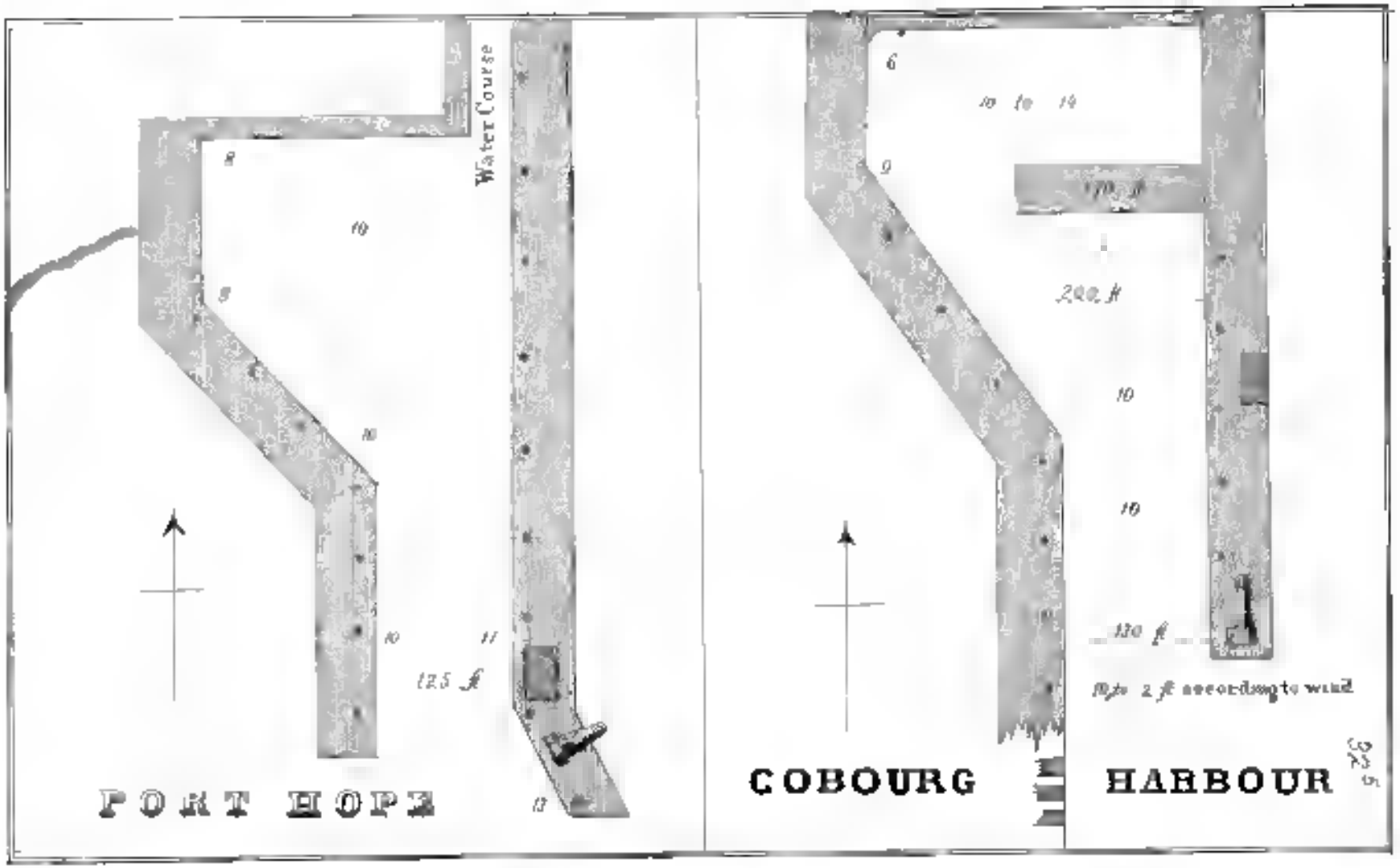

Asylum Water Works
Old Fort
Water Works
Red Buoys
White Buoys
Large Boulder
Clay
Sand
Clay
Sand
Clay
Sand
Clay
Sand
Sand
Sand
TORONTO HARBOUR
Soundings areinFeet
LAKE ONTARIO

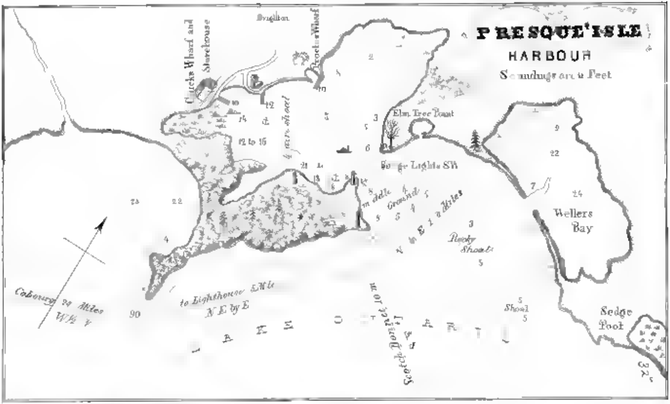

LIVERPOOL
or
PICKERING
HARBOUR
Wharf
LAKE ONTARIO
Hotel
Red Store
House
PORT of OSHAWA
six mals E of Whitby
Light under angel of roof of Storehouse

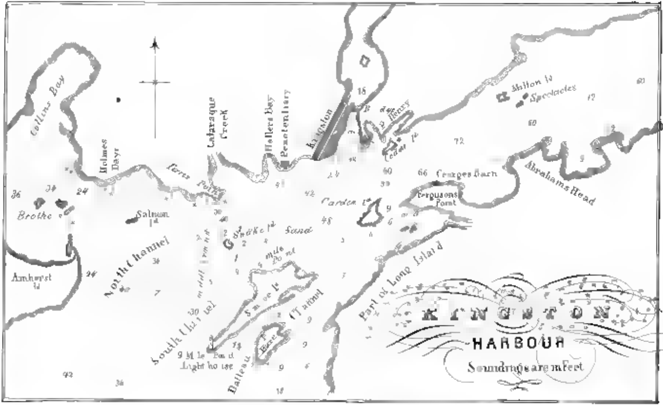

WHITBY HARBOUR
Soundings are in Feet
Ship Yard
Hotel
W by S
LAKE ONTARIO

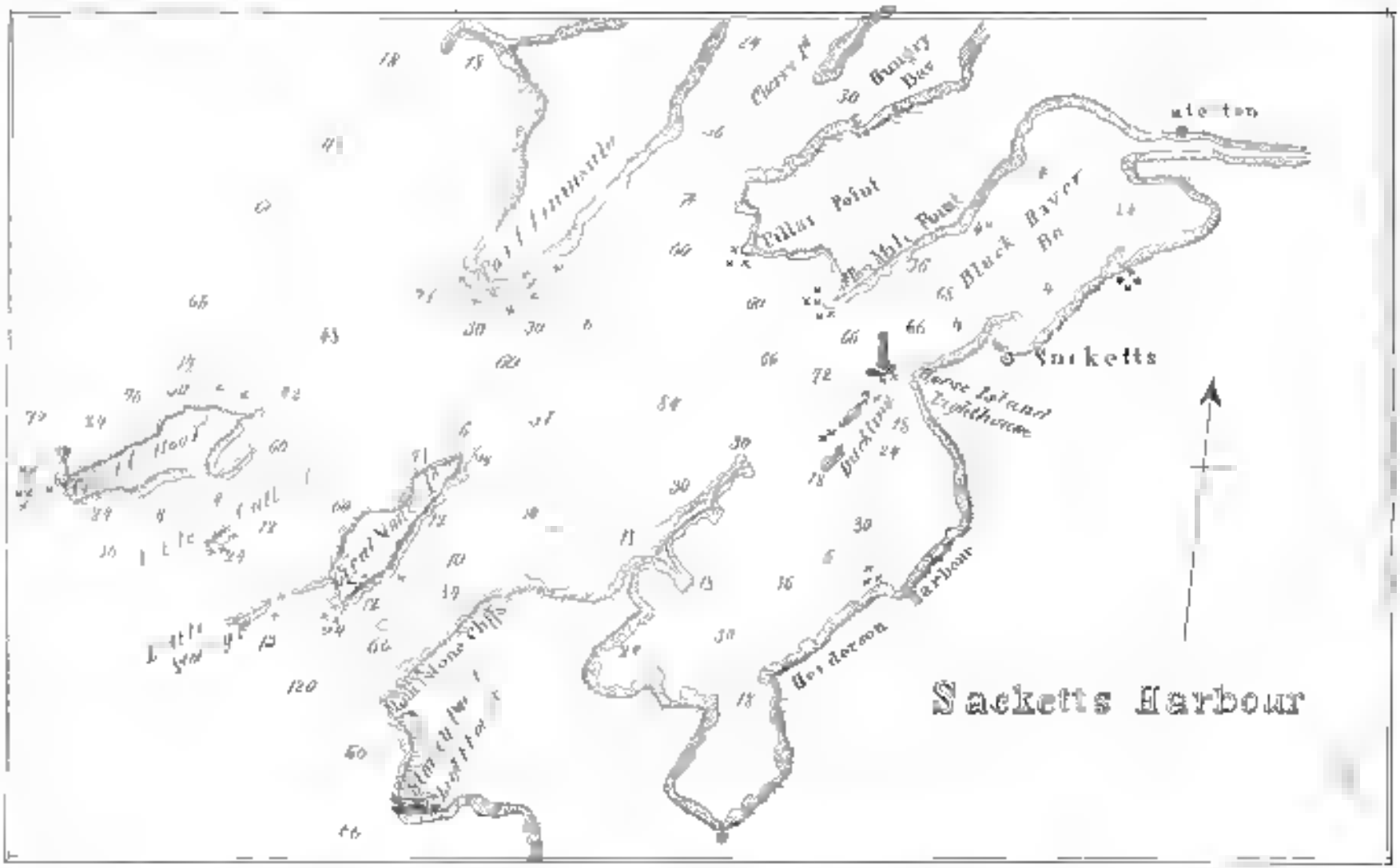


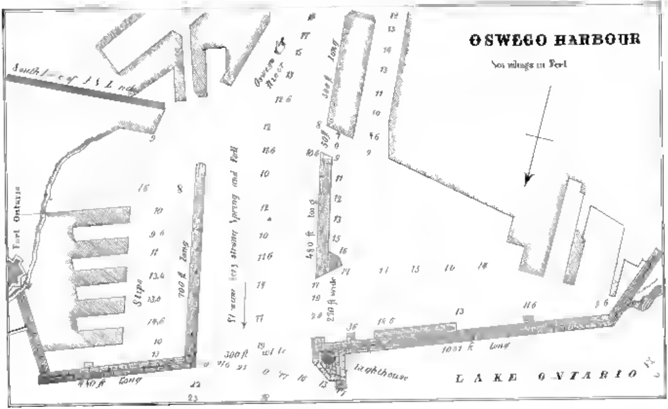
Port Darlington.

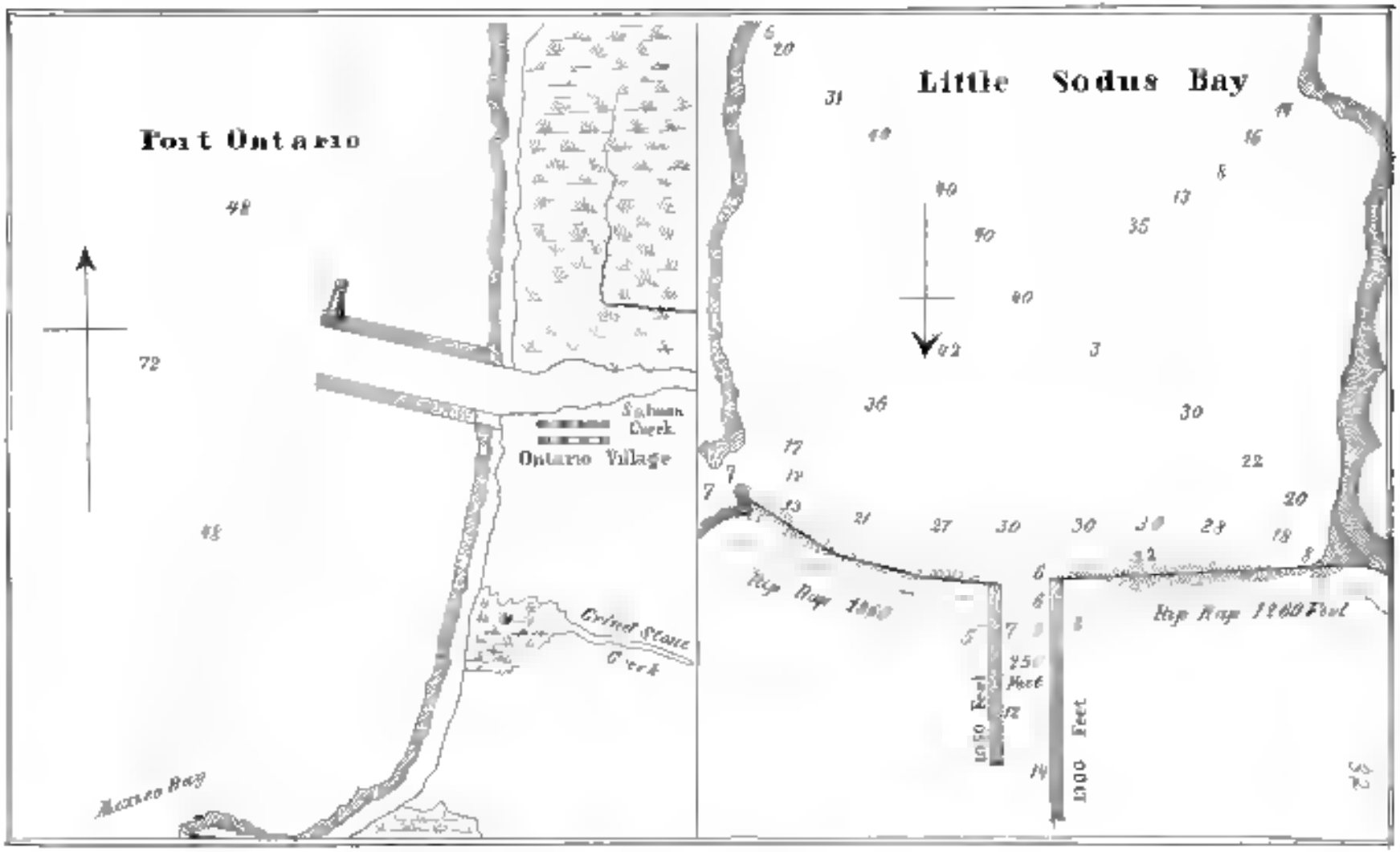

Water Course
8
10
8
10
11
125 ft
13
PORT HOPE
6
10 12 14
9
170 ft
200 ft
10
10
130 ft
10 to 12 ft according to wind
COBOURG HARBOUR

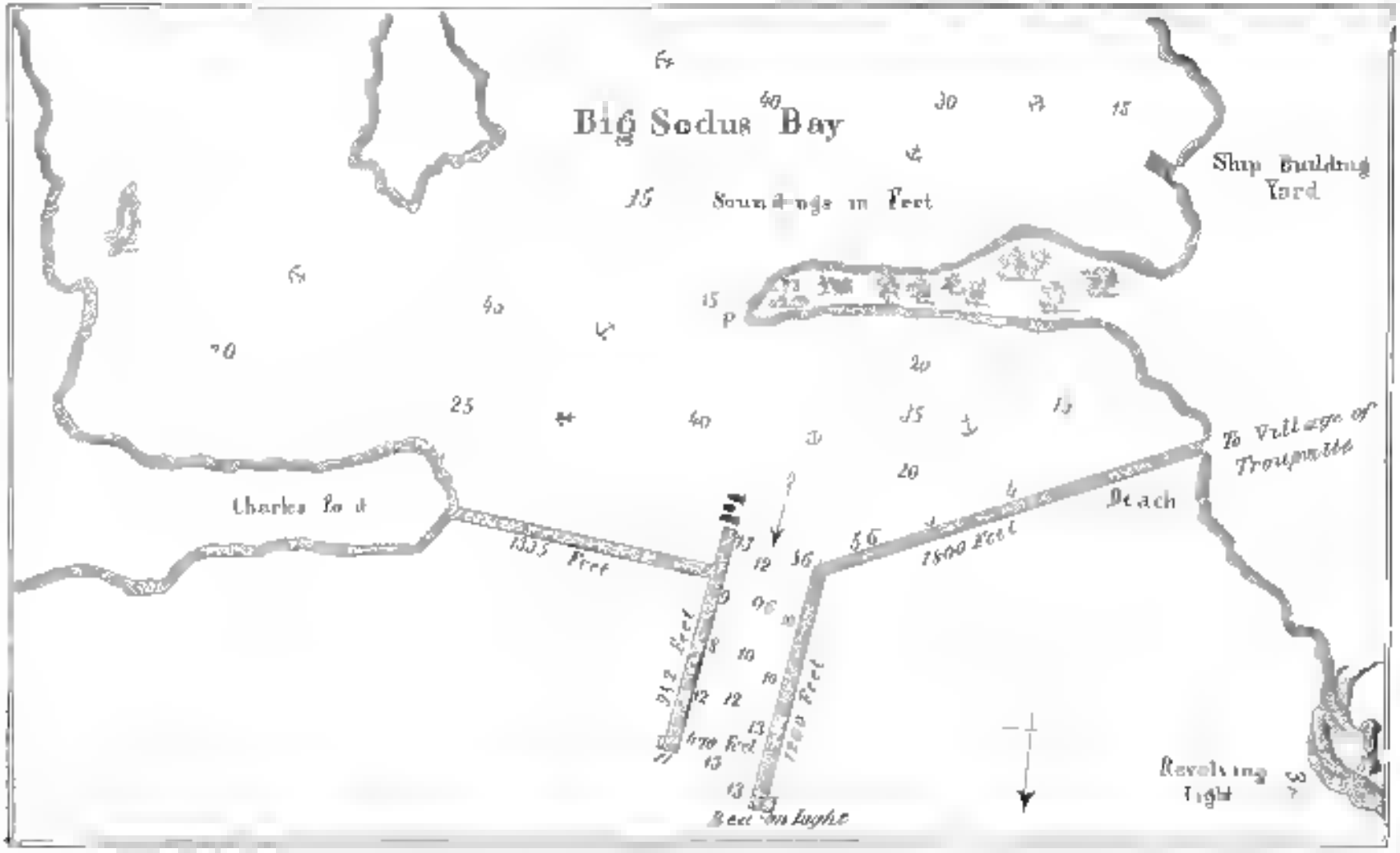

PRESQU'ISLE
HARBOUR
Soundings are in Feet
Elm Tree Point
Wellers Bay
Sedge Pool
Rocky Shoals
Shoal
Middle Ground
Cobourg 24 Miles W½ N
to Lighthouse 5 Mile NE by E
LAKE ONTARIO
Scotch Bonnet 10 m
Brighton

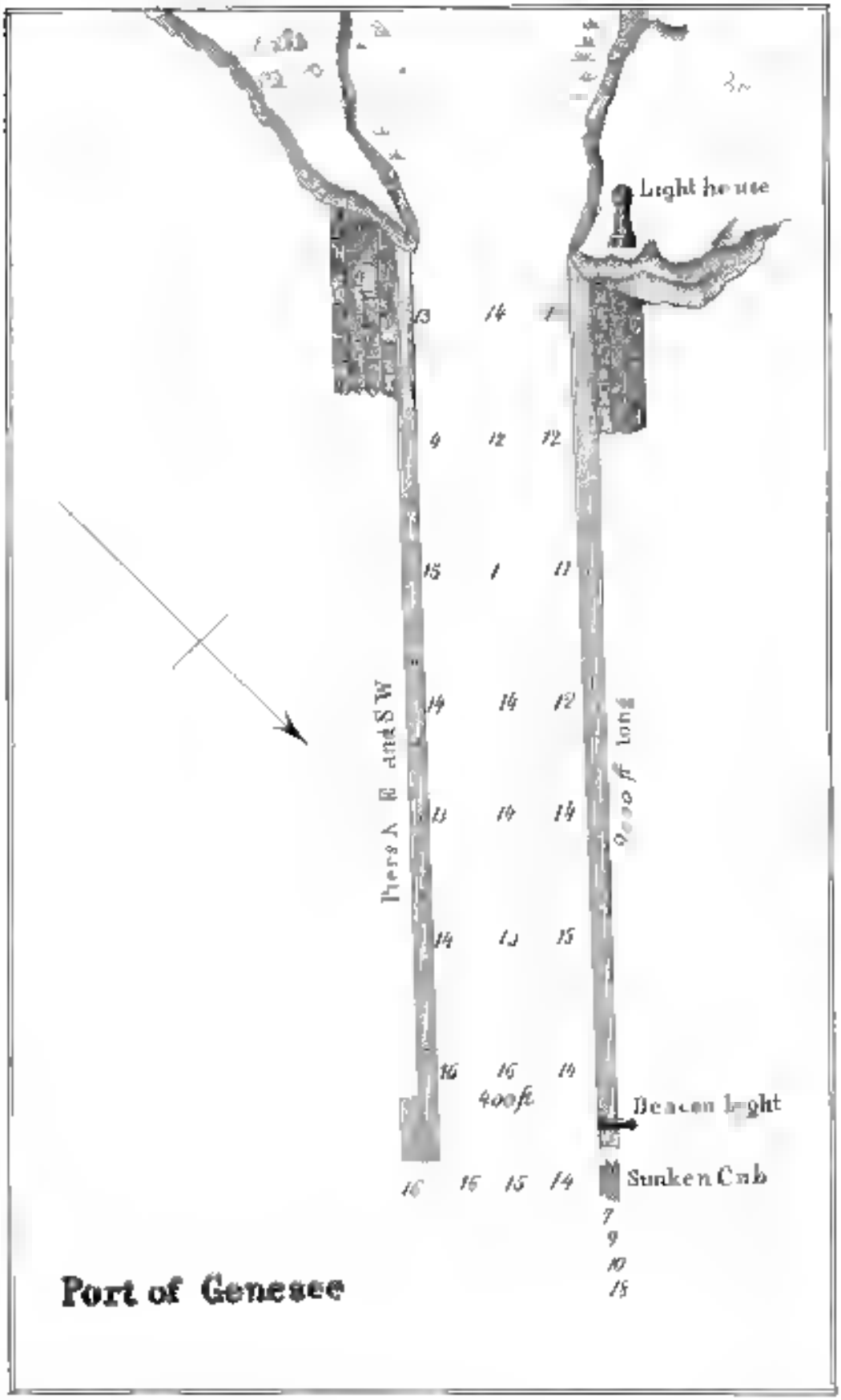

KINGSTON
HARBOUR
Soundings are in Feet
Collins Bay
Holmes Bay
Cataraqui Creek
Hollers Bay
Penitentiary
Kingston
Garden Id
Snake Id
Salmon Id
Amherst Id
North Channel
Fergusons Point
Abrahams Head
Spectacles
Part of Long Island
9 Mile Point Light house
Batteau


Pillar Point
Black River Bay
Sacketts Harbour

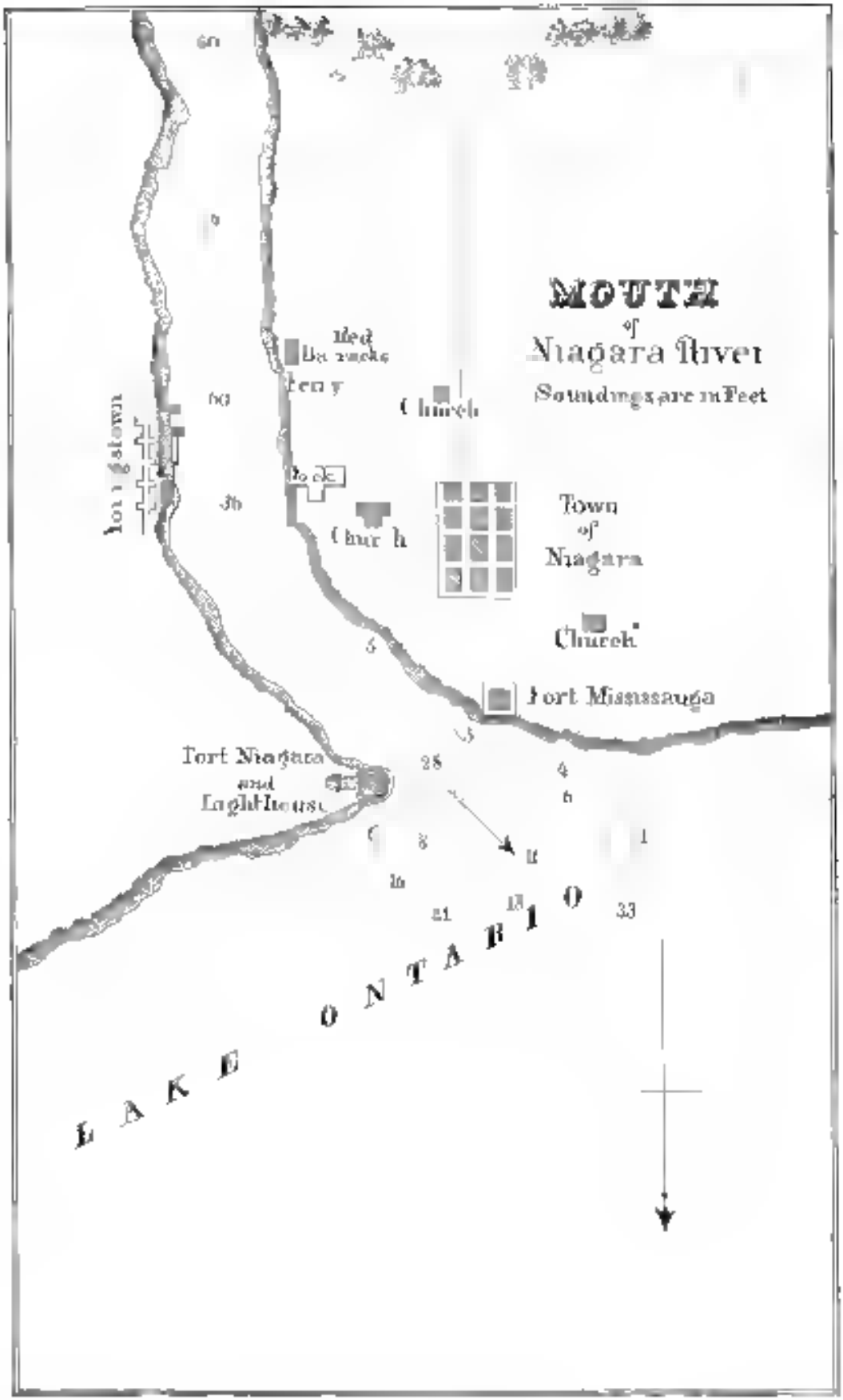

OSWEGO HARBOUR
LAKE ONTARIO
Lighthouse
Fort Ontario
Slips
700 ft long
430 ft long
1001 ft long
480 ft long
250 ft wide
300 ft
Oswego River

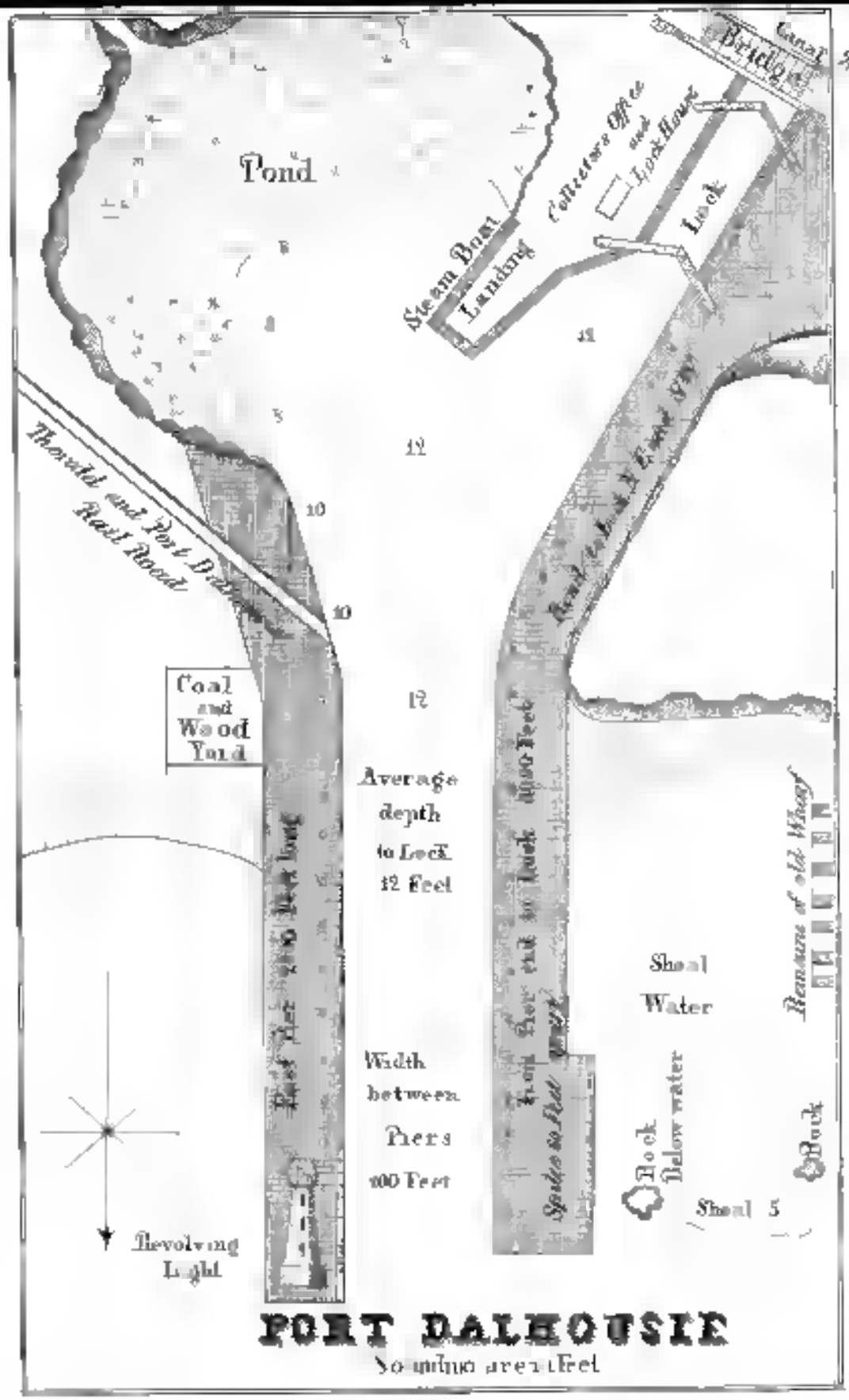

Fort Ontario
Little Sodus Bay
Salmon Creek
Ontario Village
Grind Stone Creek
Monroe Bay
Rip Rap 1860
Rip Rap 1860 Feet
1050 Feet
1100 Feet

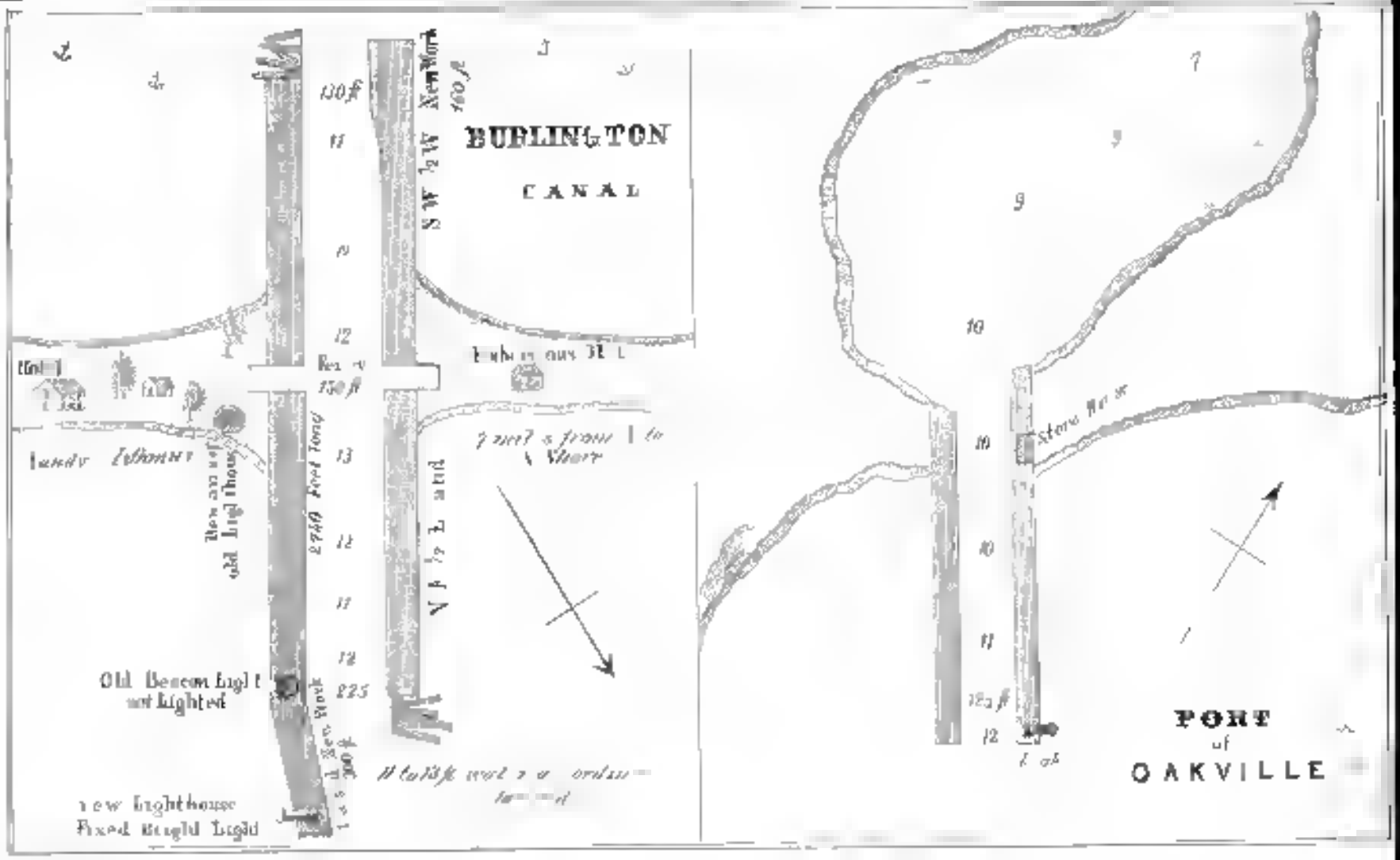

Big Sodus Bay
Soundings in Feet
Ship Building Yard
To Village of Troupsville
Beach
Charles Road
1335 Feet
1800 Feet
212 Feet
1200 Feet
470 Feet
Revolving Light
Reef Pier Light

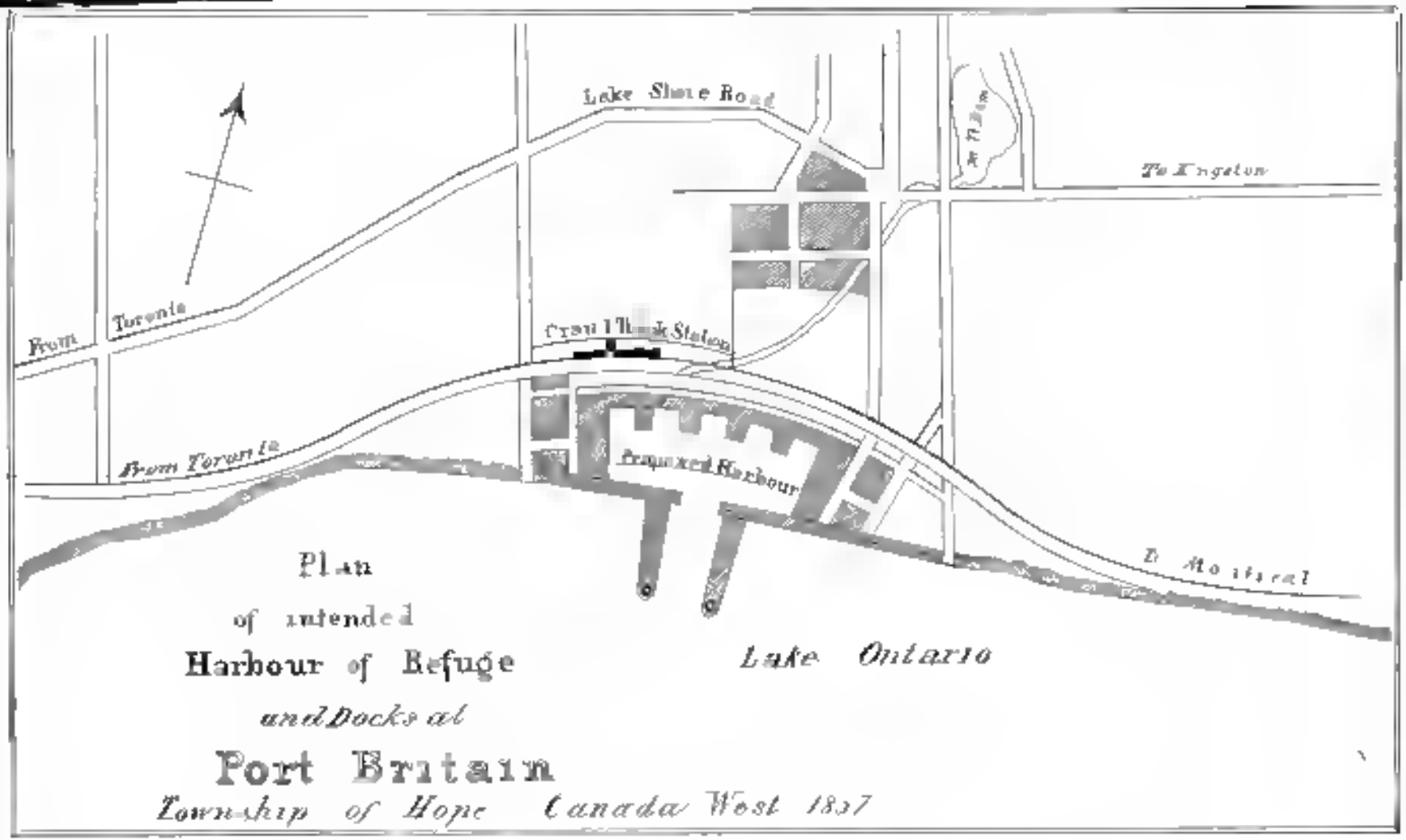


Port of Genesee


MOUTH
of
Niagara River
Soundings are in Feet
Red Barracks
Ferry
Church
Town
of
Niagara
Church
Fort Mississauga
Fort Niagara
and
Light House
LAKE ONTARIO


Pond
Canal
Bridge
Steam Boat Landing
Collectors Office and Lock House
Lock
Thorold and Port Dalhousie Rail Road
Road to the Welland Canal
12
10
10
12
Coal and Wood Yard
Average depth to Lock 12 Feet
Width between Piers 100 Feet
Shoal Water
Remains of old Wharf
Rock Below water
Rock
Shoal 5
Revolving Light
PORT DALHOUSIE
Soundings are in Feet


BURLINGTON
CANAL
Old Beacon Light
not Lighted
new Lighthouse
Fixed Bright Light
PORT
of
OAKVILLE


Lake Shore Road
To Kingston
From Toronto
Grand Trunk Station
From Toronto
Proposed Harbour
To Montreal
Plan
of intended
Harbour of Refuge
and Docks at
Port Britain
Township of Hope Canada West 1837
Lake Ontario

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H687h

THE

HARBOURS AND PORTS

OF

LAKE ONTARIO,

IN A SERIES OF CHARTS,

ACCOMPANIED BY A DESCRIPTION OF EACH,

TOGETHER WITH THE LIGHTHOUSES, HARBOUR LIGHTS, DEPTH OF WATER, COURSES AND DISTANCES, &c &c

COMPILED FROM AUTHENTIC SOURCES, THE CHARTS OF CAPT OWEN AND LIEUT HERBERT, FROM RECENT SURVEYS,

AS WELL AS

FROM PERSONAL OBSERVATIONS.

BY EDWARD M. HODDER, M.D.,

COMMODORE OF THE ROYAL CANADIAN YACHT CLUB.

GA1402
H7x7

TORONTO:

MACLEAR & CO, 16 KING STREET EAST

1857.

PREFACE.

IN offering this little work to the public, at the earnest solicitation of several of the Captains of schooners navigating these waters, I have been actuated solely by a desire to supply a want which I have frequently heard lamented, by all those with whom I have conversed on the subject.

Fully aware of the many deficiencies and imperfections which exist in it, yet I venture on its publication, confident in its general correctness.

The materials I have derived from such authentic sources as have been within my reach, from the Admiralty Chart of Captain Owen, R N., corrected to 1851, from surveys by the Corps of Topographical Engineers of the United States, and from information obtained from some of the oldest and most experienced Sailors on the Lake. And here let me express my warmest thanks to Captain Carr of the *Maple Leaf*, Captain Young of the *Chief Justice*, Captain W. Bate of the Schooner *Water Witch*, and others, who have most kindly seconded my efforts by giving me every information in their power.

I have myself visited every Port, with the exception of Sackett's Harbour and Port Ontario, and have sketched the entrances to them, taken their compass bearings, soundings, &c. &c., but from the want of the time requisite, as well as a practical knowledge in the use of surveying instruments, the charts must be looked upon only in the light of mere sketches, not drawn to any definite or particular scale.

The distances from port to port may appear great, when compared with those which have commonly been acknowledged as correct; I have, however, carefully taken them from Captain Owen's Survey, and preferred giving them as by him laid down.

I shall consider myself most happy if my humble attempt should stimulate some abler head than mine to improve upon and complete a task, which I am well aware I have only commenced; and I it will gratify me still more, if through any effort of mine a single life is saved, or the smallest craft that navigates this noble Lake is preserved from wreck.

DEDICATION.

For the Members of the Royal Canadian Yacht Club, this little work has been compiled, and to them it is dedicated, in the hope that it may not only interest, but also excite and encourage in them a taste for that invigorating, truly British pastime, and manly sport, Yachting, and make it rival in their affections the glorious game of Cricket, the Hunt, or the Gun—to the love and encouragement of these, may not Old England mainly attribute the courage and daring, the athletic frames, and hardiness of her sons? for let it not be forgotten, that the effeminacy of a people is the surest forerunner of the decay of a nation.

May it also be useful to them, by giving such sure and accurate information relative to the various Harbours and Ports on Lake Ontario, as may create in them a fondness for cruising, from the conviction, that in any weather they can speedily reach some haven of refuge, where their gallant little Barks may, in shelter and in safety, ride out the fiercest storm.

By their sincere Friend,

THE AUTHOR.

Toronto, April, 1857

HARBOURS AND PORTS.

NOTICE.—The depth of water given in the various Ports is the mean or average depth taken in the month of August at the opening of the navigation in the spring, when the Lake level is higher, this average will be exceeded by from ten to fifteen inches, in the autumn before the rainy season sets in it will be decreased from six to twelve inches.

TORONTO HARBOUR, OR BAY.

This spacious anchorage is without doubt the best natural harbour on Lake Ontario It is nearly circular, being formed by the main land on the north, and by a long, low, and narrow spit of sand, on the east, south, and south west, called the Peninsular or Island, it extends in a south westerly direction from the highlands in the township of Scarboro', and terminates in a point which suddenly turns to the north opposite the Old Garrison, and upon which trees of stunted growth are thickly scattered thus is enclosed a beautiful basin of about two and a half miles in diameter, capable of containing a great number of vessels

LIGHTHOUSE.

The south-west extremity of this island is called Gibraltar Point, on which is erected the Lighthouse, 66 feet high, having a fixed bright light.

CHANNEL.

The entrance to the harbour is by a narrow channel at its north-west corner between the Queen's Wharf and a row of buoys south thereof, which are placed in about ten feet water The present channel is 300 feet wide, and about 600 or 700 feet long, having an average depth of 11 feet; but owing to the extreme narrowness of this passage, large and heavily laden vessels often find it difficult, sometimes impossible, to beat in or out against a head wind

This channel, however, is being widened from year to year by the constant use of the dredge and I believe it is the intention of the Harbour Master to continue this useful work until a clear available space of 400 feet has been obtained

HARBOUR LIGHTS

On the Queen's Wharf are placed the Harbour Lights—the northernmost a fixed red light, the other a bright bucon light on the western extremity of the pier These lights when brought into line indicate the entrance to the channel They bear N. by W. of the lighthouse on Gibraltar Point.

In working up the Lake from the eastward at night, give the shore a good two mile berth when abreast of the Scarboro heights, otherwise the light on Gibraltar Point will be hidden by the trees on the Island. If bound into Toronto Harbour, keep nearly a mile to the W. of the lighthouse, then steer N. for the harbour lights. In the spring and fall, fogs are prevalent, which hang near the surface, and do not ascend more than thirty or forty feet from the water, the harbour lights, then, will not be seen, in which case, when well to the westward of the lighthouse on the Point, steer for the North Star, immediately under which will be found the red light on the wharf.

When the fogs are so dense as to obscure all the lights or other land marks, the only safe guide is the lead line, and the shore should not be approached where there is less than six or seven fathoms water.

SHOAL.

A sandy shoal stretches into the Lake for a quarter of a mile in a S. W. direction off Gibraltar Point, and is thence continued along the W. side of the Island extending N. to the Bar Buoys which mark the channel into the bay, at an average distance of a quarter of a mile from the Island.

Vessels running for shelter from an easterly gale should anchor on the W. side of the Island about one mile from the shore, where there is good holding ground in six or seven fathoms water, mud and clay bottom; if too near the Island the anchor will not hold in the sand, and a sudden shift of wind will put them ashore on the bar.

DANGER.

There is a large boulder stone within five feet of the surface, nearly midway between the Queen's and Garrison Wharves, and a little to the south thereof.

REMARKS.

Much having of late been said regarding the advantages which Navigation, Commerce, and the City generally would derive from an eastern entrance to the Bay, I cannot allow the present opportunity to pass without raising my voice loudly against a measure, which if carried into effect, must be followed by the most disastrous consequences to the best natural harbour on Lake Ontario.

The authors of the able reports on 'The Improvement and Preservation of the Toronto Harbour,'—to whom prizes were awarded in May, 1854, by the Harbour Commissioners—are unanimous in condemning, not only as useless, but actually prejudicial, a canal through the head or south eastern portion of the Peninsula. If the integrity of the Island is maintained, there is not the slightest fear of the present channel ever closing, even if left entirely alone; it may become narrower, but it would never become so completely blocked up, as to convert the present bay into a small lake or pond; natural causes are at work to prevent it. During the eight months of the year that the Bay is clear of ice, the amount of water taken from its surface by evaporation alone is enormous; experiments prove incontestibly that three-fourths of an inch a day is a fair average to allow for loss from this source alone. Let us assume, however, that only half an inch takes place. What will be the result? From the 1st of April to the 30th of November we have 244 days; this divided by 2, gives 122 inches, or 10 feet 2 inches, the quantity of water taken from the surface of the bay during the above-named period. Again, taking the soundings of the Bay from the water's edge to its deepest part, we find that ten feet would be a

fair average depth; thus we perceive that there is actually more water removed by evaporation than the Bay is capable of containing at any one time How, then, is this loss supplied? By an *under-current* of cold water constantly rushing into the Bay from the Lake, between the end of the Queen's Wharf and the bar buoys. This is clearly proved, both by experiment and by resorting to the same means which put me in possession of the fact. I have dived at least an hundred times from a boat moored in the channel near the buoys, and when at the bottom, with my eyes open, I have *invariably* seen myself drawn inwards towards the Bay, nor can I call to mind a single instance where the under-current set outwards or in the opposite direction.

I am well aware that the surface or upper current will often run out of the Bay, while the under current is running in, for this I have seen a minute after coming to the top of the water, neither will I deny, that occasionally, just after an easterly or south-east gale, when the waters of the Lake are driven up towards its head, and when the Bay in common with the Lake partakes of this rise, or after a strong S W blow, which produces the same effect, that this under-current may be overcome by the pressure of the increased quantity of water in the Bay, and that a reflux current may for a short time be established

The form or shape of the bar immediately opposite the Queen's Wharf, also proves the steady indraft into the Bay. I have always likened it to a man's foot, the shoal which runs from the N point of the Island, terminates suddenly near the spot where the red buoy is usually placed, this I have compared to the heel, the northern end of the bar runs parallel with the wharf, and represents the sole of the foot, and the many sandy prolongations which run easterly may be likened to the toes

To this natural cause, and to this alone, the persistance of the channel at the Queen's Wharf is dependant do away with this current or lessen its force, by another opening at the east end of the Bay, and in ten years' time the sand would gain such a mastery as to bid defiance to the dredge.

There are many other weighty reasons against making a canal at the S E end of the Bay, they are, however, so ably set forth in Captain Richardson's admirable report, that it is quite unnecessary for me to allude to them.

Might it not be desirable to build a short pier of crib work, say two or three hundred feet long, parallel with the Queen's Wharf, and at whatever distance from it to the south that the Harbour Commissioners may deem sufficient for the width of the channel, and upon the ends of which lights should be erected?

This pier would not in any way interfere with the escape of ice in the spring, it would clearly indicate the width of the channel, and for which purpose the present buoys are perfectly inadequate at night, and it could not have any injurious effect in causing the sand brought in by the wash of a S W. wind from being deposited in any other situation than that in which it now takes place

Should this suggestion not be deemed worthy of the consideration of the Harbour Commissioners, they should, in common justice to all sailing vessels (more especially strangers) visiting this port, cause to be placed at the narrowest part of the channel south of the Queen's Wharf, either a small beacon light (which might be lighted with gas), or a buoy fitted with bells, and which the action of the water alone would be sufficient to sound.

COURSES AND DISTANCES FROM GIBRALTAR POINT,

Taken from the Admiralty Chart surveyed by Capt Owen, R.N

From Toronto to Burlington Canal (Hamilton) S W 35 miles.
" " Port Dalhousie, S by E 33 miles
" " Mouth of Niagara River, S E by S 35 miles
(When on the bar bring the Fort Niagara to bear S E. by E)
" " Devil's Nose, E by S 86 miles.
" " Genesee River (Rochester), to clear Braddock's Point, E by S ¼ E 110 miles.
" " Oswego, E ½ S 176 miles.
" " Long Point Light, E ½ N 136 miles.
" " Cobourg E. N. E. ¼ E 78 miles.
" " Whitby N. E by E 34 miles

No variation to be allowed for compass when within 20 m. E. or W. of Toronto.

THE PORT OF LIVERPOOL, OR PICKERING,

FORMERLY CALLED FRENCHMAN'S BAY

This Port is 26 miles N. E ½ E. of Toronto It is formed by a deep bay running into the land, and separated from the Lake by a sandy and gravelly beach, through which the Harbour Company have cut a Canal 100 feet wide.

HARBOUR LIGHT

On the east pier there is a low miserable lighthouse, the light from which cannot be seen five miles in the Lake

The harbour itself is well sheltered, being completely land-locked, but from the foulness of the bottom (principally from weeds) an anchor will not hold during a hard blow.

DEPTH OF WATER.

The average depth of water inside the bay is 9 feet 6 inches; at the outer mouth between the piers, 11 feet 6 inches, and at the inner mouth 7 feet 6 inches

Through this canal a current runs in and out with great regularity, once in about every four minutes

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WHITBY HARBOUR.

Six miles to the eastward of Liverpool, and 34 miles N E by E of Toronto, is the Harbour of Whitby, one of the best and most secure on the north side of the Lake. It stands near the centre of a deep bay, between Raby Head on the E and Scarboro' Heights on the West, and three and a half or four miles north of line drawn between these two points.

The harbour is formed by a strong breakwater of rip-rap or crib-work, stretching across the head of the bay, by which it is separated from the Lake, thus is enclosed a capacious basin, the entrance to which is at its eastern extremity, between piers running south a considerable distance into the Lake, 250 feet apart, and with 13 or 14 feet water in the channel

HARBOUR LIGHT

The lighthouse is 12 feet high, built on the end of the west pier, (which extends a little further into the Lake than the east,) having a fixed white light, badly seen in approaching from the E. or W. but good from the southward

TIDE.

A strong tide or current sets in and out of this harbour, which at times is so strong as to turn a vessel's head round, when entering with a light wind.

On entering this harbour, blowing fresh from the S. S. E. or S. W., steer for the *Red Store House*, keeping as close to it as safety will permit, then luff your vessel sharply to the wind, back the topsails, to check her way, and anchor as indicated in the chart.

DANGER.

Midway between Whitby and Liverpool there is a nasty shoal in shore, one mile W. of the township line.

COURSES AND DISTANCES.

From Whitby to Toronto, S. W. by W. 34 miles.
" " Burlington Canal, S. W. ½ W. 70 miles.
" " Port Dalhousie, S. S. W. 55 miles.
" " Rochester (clear of Braddock's Point) E. S. E. ¼ S. 93 miles.
" " Oswego, E. by S. 153 miles.
" " Long Point Light, E. 107 miles

OSHAWA.

The Port of Oshawa is 6 miles E. of Whitby. It is situated in the head of a small bay, and consists of a well constructed wharf, running out from the main land into 10 feet water.

LIGHT

At the south end of the wharf there is a small store-house painted red, and under the angle formed by the roof, is placed a large lamp, which serves the purpose of a lighthouse.

This port is well secured from any wind north of E. or W., but sadly exposed to the Southward of these points.

The west side of the bay of Oshawa is formed by a high clay bank, almost perpendicular towards the Lake, on the extreme point of which stand three or four trees.

DANGER.

The E. point is called Oshawa Island, bearing S. by E. from the wharf; the water here is very shoal, and a reef of large boulders extends into the Lake S. E. for 300 or 400 yards, which must be given a wide berth.

From the point of land about midway between Whitby and Oshawa, there is another reef of large boulders running out E. S. E. into the Lake.

PORT DARLINGTON.

The Port of Darlington is 8 miles to the eastward of Oshawa, 50 miles E. N. E. of Toronto, and 29 miles W. by S. of Cobourg.

The Harbour Company have much improved this snug little port, by extending the piers into 12 feet water, and dredging the land locked basin within, where vessels drawing 9 feet or less may lie in safety in any weather.

The W. pier extends about 50 feet farther south than the E. pier, whereby the roll of the Lake during a S. W. blow is materially broken.

LIGHT.

A lighthouse is erected on the E. pier; but, although the light is bright and good of it, in common with most of the Harbour lights on the Canada side, is far too low to be seen at any great distance in the Lake.

RABY HEAD.

One and a half miles W. of Darlington is the high, perpendicular, and bluff clay point called Raby Head. Near the Lake it is destitute of trees or bushes, but farther back stands a farm house and barn, surrounded by several lofty poplars and other trees.

Neither the buildings or the trees can be seen from the Lake when due south of Raby Head.

Darlington is the Port of Bowmanville, from which it is distant two miles; the Grand Trunk Railway Station is within half a mile of this thriving harbour.

For Courses, &c., see Bond Head.

BOND HEAD, OR PORT OF NEWCASTLE.

Between 4 and 5 miles E. by N. of Darlington is the Port of Bond Head. It consists of a wharf run out into 10 feet water, but from its exposed situation can only be approached in fine weather, or when the wind is off shore.

DANGER.

Four miles E of this port there is a large boulder some distance in the Lake, called the Peach Stone, and 4 miles E of this, again, there is a reef of boulders extending 200 or 300 yards into the Lake in a southerly direction, off a headland

COURSE

In running from Darlington to Port Hope or Cobourg, steer E ½ N for 18 or 20 miles to avoid these dangers, giving the shore a good wide berth, then N. E by E ½ E for Port Hope, and E N. E ¼ E for Cobourg

PORT HOPE.

Twenty-three miles E ½ N. of Darlington is Port Hope Harbour, which is formed by running two rows of piers or crib work out into 13 feet water, having a pond or basin at their inner or northern extremity.

During a South, S. E., or S. W., gale, this Port cannot be made by large vessels drawing over 9 feet water with safety, owing to the tremendous swell rolling in from the Lake, besides which, the piers being only 125 feet apart at the mouth, and the basin very small, there is not room to check the speed of a vessel, or to snub her, without danger to herself or others

During a southerly gale, also, the swell in the basin is so great as to cause much injury to vessels by rubbing

From any wind N of E or W, however, this is a perfectly safe and snug harbour

LIGHT

The Lighthouse is built on the E pier,—a fixed white light

DANGER.

See Cobourg

COBOURG.

The Harbour of Cobourg is situated seven miles east of Port Hope, and is formed very much in the same way A shifting bar of sand is thrown up during a S W gale, which renders the entrance to it still more dangerous than Port Hope for vessels of deep draft The Harbour is more capacious, and when once entered, more secure, than that of Port Hope, having a second or inner basin with plenty of water, where no sea can injure or disturb the vessels that lie therein

The mouth of the harbour is 130 feet wide, with water varying from 10 to 13 feet.

LIGHTHOUSE.

The lighthouse is built on the E. pier, 20 feet in height, the light is bright and good, and can be seen on a clear night seven or eight miles off.

DANGERS.

In entering this port, particularly at night, great care must be taken not to run too close to the south end of the west pier, where broken crib work and numerous piles project nearly 100 feet futher into the Lake than the end of the E. pier.

SHOAL.

Midway between Port Hope and Cobourg there is a dangerous shoal called Gull Island, which is about two miles long, and about one mile from the shore; it is sometimes bare, and has erected upon it a lighthouse 45 feet high, having a bright fixed light, which on a fine night can be seen from ten to twelve miles.

When sailing between these ports, give the shore a good two miles offing, and on no account attempt to pass between the lighthouse and the land

VARIATION OF COMPASS.

When within 20 miles E. or W. of Cobourg, allow ½ a point W. for the variation of compass

REMARKS.

In running down the Lake from Hamilton to Long Point, there is nothing by which one harbour light can be distinguished from another, with the exception of the red light on the Queen's Wharf, at Toronto, and this cannot be seen a mile or two south of Gibraltar Point. Would it not be desirable, therefore, in so important a port as Cobourg, where all the steamers plying between the head of the Lake and Kingston, are in the habit of calling, besides numerous sailing craft, to have its light coloured so as to distinguish it from all others? This could be done at an expense of a few pounds, by substituting stained glass, either blue, red, or green.

COURSES AND DISTANCES.

Cobourg to Toronto, W. S. W. ½ W. 78 miles
" " Port Dalhousie, S. W. ½ W. 90 miles.
" " Burlington Canal, S. W. by W. 113 miles.
" " Rochester, S. E. by S. 67 miles.
" " Oswego, E. S. E. 105 miles.
" " Long Point, E. ½ S. 61 miles.
" " Presqu' Isle Point, E. by N. 24 miles.

GRAFTON.

The village of Grafton is about 8 miles E. of Cobourg, having a wharf run out from the land in the Lake into 10 feet water.

COLBORNE.

Between 8 and 9 miles below Grafton is the village of Colborne, with its wharf for the accommodation of trading craft

Both these ports are exposed to the heavy seas of the Lake, and afford no shelter to vessels, except when the wind is off shore, or to the northward of E or W. The villages themselves being small, they offer no inducement to the numerous Lake steamers to touch at their ports, and which are frequented only by small schooners carrying wood, or in the fall of the year, produce of different kinds

DANGER

One mile W. of Colborne there is a projecting point of land called Ogden's Point, off which is a reef of boulders

In approaching the Port of Colborne from the Westward, care must be taken to give this point a wide berth.

COURSES AND DISTANCES

From Cobourg to Colborne, E. by N. 16 miles.
" Colborne to Presq' Isle Point, E. by S. 8 miles

PRESQU' ISLE HARBOUR.

Twenty-four miles E ¼ N. of Cobourg is the west or bluff point of Presqu' Isle, well wooded, and with 90 feet water within a short distance of the shore

LIGHTHOUSE

Five miles N. E. by E. of this point will bring you abreast of the lighthouse, which is 67 feet high, and upon which there is a very good fixed bright light, that can be seen in fine weather from 12 to 15 miles

Immediately under the lighthouse, to the southward, there is shoal water with boulders, but by keeping half a mile from the shore, this danger is easily avoided.

CHANNEL.

The channel which leads into this fine harbour now becomes difficult, owing to the shoals which surround it being entirely destitute of buoys or beacons to mark them.

When making this harbour in the day time, steer to within ½ or ¾ of a mile S. by E. of the lighthouse, thence N. by E. for a very large and solitary *Pine Tree*, which stands on the main land, some distance from the shore; (this object is so conspicuous as to render a mistake impossible,) continue this course for a mile and a quarter, or until the range lights (in the harbour) are brought into line; then alter your course, and steer S. W. directly for the easternmost of the two lights

HARBOUR LIGHTS.

At night, as the pine tree cannot so well be seen, steer N. by E. until the range lights are seen in line; then change your course, steering directly for them, (that is S. W.) keeping within fifty yards N. of the point on which this range light is built, (or even nearer,) as there is from 18 to 22 feet water directly under it. Having passed this point, anchor in the little bay between the two range lights

DANGERS.

1. Between the main lighthouse on the S. E. point and the range light on the N. E. point, extending in a north-easterly direction for about ¾ of a mile, is a shoal called

the "*Middle Ground*," having only from 4 to 6 ft water on it, and formed of coarse gravel, sand, and mud Captain Halbott, who has traded to this port for many years, told me, that when the Lake is high, he is in the habit of taking his schooner across this shoal, through a channel close to the two lights, his vessel, when laden, drawing 9 feet.

2 To the north of the lighthouse built on the N E point, running out from the main land, there is a low, marshy spit, destitute of timber, but easily recognised by a *large dead Elm tree*, bearing due N of the lighthouse From this point, extending west and south-west, there is another formidable shoal, upon which the *Passport* got ashore on 29th October, 1856.

I have called this, Elm Tree Point and Shoal the channel between the beacon light, middle ground, and elm tree shoal, is about ½ a mile wide

3 W N W of the second range light, there is another small shoal called, "*Four Acre Shoal*," nearly half a mile from the shore, but with plenty of water all round it The existence of this shoal renders it hazardous at night to stretch too far into the bay beyond the second range light

4 Two miles E S E of the main lighthouse, there is a dangerous rocky shoal in the Lake, with only from 3 to 5 feet water upon it It is to the eastward of the course steered from the lighthouse for the Scotch Bonnet, and one mile S E of this, again, there is another but smaller shoal

These shoals would materially obstruct the entrance into Weller's Bay

SCOTCH BONNET LIGHTHOUSE

The Board of Works have just completed an excellent lighthouse on Egg Island, or the Scotch Bonnet, which is one mile S S W of Nicholas Island It was lighted for the first time in September, 1856 A bright fixed light, bearing S E of Presqu Isle Light Can be seen 13 miles

REMARKS.

This nearly land locked haven of refuge, when once entered, is perfectly secure from every wind or sea, there is plenty of water with good holding ground, its dimensions are ample for the whole navy of the Lake, it is well lighted, it is easily entered with any wind, except from the N W, and when it blows from this quarter, shelter is easily obtained in many other places, yet, from the want of a few beacons or buoys, vessels often keep the open Lake, or run for much less secure places, rather than face the dangers of the shoals.

COURSES AND DISTANCES.

From Lighthouse to Presqu' Isle Point S W by W 5 miles.
" Presqu' Isle Point to Cobourg, W ½ S 24 miles
" " Lighthouse to Scotch Bonnet, S E 10 miles
" Lighthouse to Genesee River, S ½ E 60 miles.
" Scotch Bonnet to Long Point, E by S 25 miles.

WELLER'S BAY.

"The Underwriters, Forwarders, Shipmasters, and others interested in the navigation of Lake Ontario are about to petition the Government for the construction of a

Harbour at Weller's Bay, in the County of Prince Edward. An opening one hundred rods wide, with a channel one hundred and fifty feet wide and fourteen feet deep, has within a few years past, been made through the beach from the Lake to Weller's Bay, which is said to be capable of sheltering all the vessels which navigate Ontario. The entrance to the harbour of Presqu' Isle is difficult and frequently attended with casualties, and it is justly considered necessary to construct a harbour at the place mentioned, which the mariner can safely enter in a storm. Several vessels, as our readers know, were driven ashore within a few miles of Weller's Bay, or, rather the opening leading into it, which might have been saved, had the entrance been known to the masters.

There can be no doubt that the Government will entertain the prayer of the petitioners, and immediately take proper steps to erect a Harbour of Refuge to our fresh water seamen, that will serve to encourage them in their arduous and dangerous calling.

In fact, "it is the duty of Government to render every aid in facilitating and advancing the interests of marine investments, which contribute so largely to the revenue of the Province and the convenience of the people; and we feel confident the object will be acceded to without any circumlocution or useless delays."—*Kingston News*, Jan. 7, 1857.

If the entrance to Weller's Bay was not rendered more dangerous than the entrance to Presqu' Isle Harbour, by the existence of the two shoals to which I have above alluded, the prayer of the petitioners would, in all probability, have the favourable consideration of the Government; but the existence of these two formidable shoals at the very entrance of the bay, exposed as they also are to the full sweep of the Lake, during a south or south west wind, (the very winds which would render it necessary for vessels to run into Weller's Bay for shelter,) would, I conceive, be an insuperable objection to the expenditure of so large a sum of public money as it would require to make this bay an efficient harbour of refuge during a dark and stormy night.

Far better would it be to petition the Government to expend one fourth of the sum in improving the entrance into Presq' Isle, and which is already well lighted. The shoals, bad as they are, are so land-locked and protected from the heavy surge of the sea, as hardly to endanger any vessel which might be so unfortunate as to get aground on them.

The shoals opposite the entrance to Weller's Bay are rocky, and have only from 3 to 5 feet water on them; they are also so exposed, that any vessel running ashore on them during a gale, must soon go to pieces.

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KINGSTON HARBOUR.

Kingston Harbour, next to the Bay of Toronto is the best natural harbour on Lake Ontario; the approach to it, however, is intricate—consequently, dangerous.

It is situated at the N. E. corner of Lake Ontario, just where the Lake terminates and the River St. Lawrence begins.

CHANNELS.

There are three channels by which it may be made.

1st. The Batteau Channel between Wolfe or Long Island, and Simcoe or Gage Island: this is generally used by small craft only, having in several places little more than two fathoms water.

2nd. South Channel, between Simcoe or Gage Island and Snake Island; here, also, the water becomes shoal, having only 2½ fathoms

3rd. North Channel, which is the best: it runs between Snake Island and the main Land, which, although it increases the distance a little, is by far the safest, having from 4 to 10 fathoms water in it

From South Bay Point in Prince Edward's District on the west, to Stoney Point in New York State on the east, the navigation of the Lake is interrupted by numerous islands, shoals, and rocks, which renders the approach to Kingston Harbour dangerous to vessels unacquainted with it

SOUTH CHANNEL.

In making this harbour from any of the western ports of the Lake, steer for the Mid-Channel between the Real and the False Ducks, then alter the course to N. E. ½ E., which will take the vessel through the south channel direct to Kingston Harbour.

Should there be a head wind, make this course the base line, never passing it to the southward, but stand off and on to the northward and eastward until inside Nine Mile Point on Simcoe Island; keep close to Four Mile Point, (on Simcoe Island) leaving Snake Island, which may be known by a single tall elm tree, and upon which the Board of Works are about to erect a lighthouse,) bearing N. W. or to the left, from thence the course is clear to Kingston.

In running along Simcoe Island from Nine Mile Point Lighthouse* to Four Mile Point, do not follow the curve of the island, as the water becomes very shoal.

NORTH CHANNEL

Should the North Channel be preferred, when inside Nine Mile Point Lighthouse, steer due North till midway between Snake Island and the main land: this course will clear a shoal bearing N. W. of the lighthouse, and give Snake Island a good half mile berth to the eastward, thence due east into the harbour.

In making Kingston from Oswego, two courses may be taken. Due N. will take you to Nine Mile Point, clearing the Ducks, leaving them to the westward, and Pigeon Island and Charity Shoal to the eastward.

North by West (which is the best course) will take to mid-channel, between the True and False Ducks.

DUCKS LIGHT

At night the stationary bright light of the False Ducks will be first seen, but in the day time, South Bay Point, which is high bushy land, will be seen before the Ducks.

SOUTH BAY POINT.

Should a gale be coming up from the W. or S. W., good anchorage and shelter can be obtained inside South Bay Point: to make it, keep to the eastward of the Outer Drake Island, and to the north of the Inner Drake (the False Ducks) and anchor off the N. E. point, or run alongside a small wharf which will be found there.

UPPER GAP

If obliged to run for shelter behind South Bay Point, Kingston may afterwards be made by passing through the Upper Gap, that is, between Indian Point on the West,

* The Lighthouse on Nine Mile Point is 45 feet high, and furnished with a good stationary bright light.

and Amherst Island to the East Steer N. by E. till between Amherst Island and the main land, then E. N. E. till North of the Brothers, thence E. to Kingston.

REAL DUCK.

Shelter and good anchorage can also be obtained inside or to the N. E. of the Real Duck Island.

NOTE.—There is a channel between South Bay Point and the Outer Drake, which, however, should not be attempted except with a leading wind, in fine weather, and by a good pilot, as a dangerous shoal exists between this island and the point.

COURSES AND DISTANCES.

Kingston to Snake Island, S. W. by W., 4 miles.
" Nine Mile Point, S. W. by S., 8½ miles.
" Mid Channel between True and False Ducks, S. W. ½ W. 27 m.
Nine Mile Point to South Bay Point, S. W. by W. 26 miles.
" " W. end of Galloo Island (Lighthouse) S. by E. ½ E. 23 m.
Mid Channel between Ducks to Long Point, W. S. W. 25 miles.
" " " Oswego, S. by E. 40 miles.
" " " Genesee, S. W. 75 miles.
" " " Port Dalhousie, W. S. W. 165 miles.
From Long Point Light to Toronto, W. by S. 136 miles.

SACKETT'S HARBOUR.

I have not visited this Harbour, and I have experienced some difficulty in obtaining authentic information respecting it, that which is here given, however, can be relied upon.

It is not a port of so much importance in a mercantile point of view as many others, although, from the great depth of water in the bay, its secure and sheltered position, and tolerably easy access, it should be ranked amongst the best on the Lake. These recommendations, together with its capabilities of being strongly fortified, have induced the Government of the United States to make it their Naval Depot or Arsenal.

SITUATION.

It is situated on the south shore of Black River Bay, an arm of the Lake running several miles inland, having point Peninsula bearing W. by N. about nine miles, Great Stoney Island and Great Galloo Island, bearing W. by S. eleven and fifteen miles respectively.

LIGHTHOUSE.

The lighthouse is built on a rock called Horse Island, at the South Western point of Black River Bay, one and a half miles W. of the Harbour, it has a good fixed bright light. The lighthouse on the Galloo Island is at its S. W. end, bearing W. by S. ½ S., distant 21 miles.

In making this harbour from the westward, steer for the mid channel between the Ducks and Galloo Island, thence E by N direct into the bay, midway between the light on Horse Island and Point Peninsula.

From Oswego, N ½ E for Galloo Light, and when well to the north of the Island, E by N as before

From Kingston, after passing Nine Mile Point on Simcoe Island, two courses may be taken. 1st S by W. for about ten miles, until south of Charity Shoal, thence E S E 15 miles, till abreast of Point Peninsula, thence E into the harbour; or, 2nd, if the wind be favourable, after passing Nine Mile Point, steer S E 25 miles till off Point Peninsula, thence E as before This course will leave Pigeon Island and Charity Shoal well to the westward.

There are other channels by which this harbour may be made in fine weather, or under the guidance of a good pilot, but they are more intricate and dangerous than those laid down

Black River Bay is clear of shoals or rocks, with depth of water sufficient for vessels of the largest size

COURSES AND DISTANCES.

From Sackett's Harbour to Light on Horse Island, W by S 1½ mile.
" " Point Peninsula, W by N 9 miles
" " N E point of Great Galloo Island, W by S 15 m
" " N E point of Great Stoney Island, W by S 11 m
" " S E point of Ducks Island, W ½ S 28 miles.
" " Long Point Light, W by S 60 miles
From Horse Island Light to Stoney Point Light, S W by W 12 miles

CAUTION

Nearly mid-channel between Stoney Point and Great Stoney Island there is a shoal with only seven feet water —

From Stoney Point to the False Ducks, passing to the Southward of the Great Galloo Island, W by N 32 miles
From the N E end of Stony Island to the W end of Grenadier Island, N N W 11 miles

CHARITY SHOAL.

From Nine Mile Point to centre of Charity Shoal, S by E 9 miles
" Great Galloo Light to do N by W 13 miles.
" Horse Island Light to do W N W 22 miles
" Anchorage at Real Ducks to do N E by N 12 miles.
" Ducks Lighthouse to do E N E 20 miles

PIGEON ISLAND

From Pigeon Island to Nine Mile Point Light, N 7 miles
" " Charity Shoal, S E by E 3½ miles.
" " Galloo Light, S S E 16 miles.
" " Horse Island Light, E S E 26 miles
" " Point Peninsula S E by E ½ E 18 miles
" " Ducks Light, S W by W 18 miles
" " Anchorage at Real Ducks, S S W 12 miles.

PORT ONTARIO.

Twenty miles N E by E of Oswego, and N of Mexico Bay, is Port Ontario on Salmon Creek a place of no considerable importance, yet possessed of a good harbour, which is entered between piers running W N W a considerable distance into the Lake

LIGHT

The Lighthouse is on the N. pier end, is 52 feet high, having a fixed bright light.

The land both north and south of it is very low, and cannot be seen at any great distance; there is, however, good depth of water in every direction

I have not been into this port, and have been unable to obtain reliable information as to the soundings inside the harbour.

OSWEGO HARBOUR.

This excellent Port is in a great measure reclaimed from the Lake by skilful engineering, and at an enormous expense It is situated at the mouth of the Oswego River, and protected from the heavy seas caused by westerly and north west gales by walls of solid masonry.

Capacious as are the basins, slips and other parts of the harbour, they are even now barely sufficient for the accommodation of the numerous steamers, propellers, and schooners, which bring their valuable cargoes from all parts of the Upper Lakes to this busy and prosperous city.

The enterprising merchants and citizens of Oswego, aware of the insufficient accommodation afforded to the shipping visiting their port, are now engaged in devising plans for the enlargement and improvement of this important harbour amongst those may be mentioned—

1st The construction of a pier from a point 1½ miles west, to a point north of the lighthouse, 800 or 1,000 feet in the Lake.

2nd A similar harbour east of the river and north of the Fort.

3rd The construction of a lock to admit vessels into the pond above the dam, 500 feet wide, and one mile long.

The river Oswego has its source very near the head of the Mohawk; it passes through Lake Oneida, and in its course to Lake Ontario receives the Seneca River, besides the waters of several less streams and many small lakes. The waters from those in the spring and fall of the year so greatly swell and increase its current, that sailing vessels are unable to stem it, except when favoured by a strong northerly breeze.

To obviate this difficulty, numerous small but powerful tug boats are constantly plying about the mouth of the harbour, and when a large and heavily laden schooner comes within a mile or so of the port, they run out, seize upon their helpless prey, and conduct it alongside the wharf or warehouse to which it may be consigned, with as much ease and precision as a carriage can be driven up to a street door

There are no rocks or shoals to be feared in approaching this port; the only dangers consist in the very heavy sea, which rolls into the harbour during a westerly blow, and the want of room to manœuvre or work a vessel when inside.

LIGHTHOUSE

The lighthouse is built on the west pier, is 82 feet high, and has a very good bright fixed light.

COMPASS

When within twenty miles East or West of Oswego, allow 1° or 1° 30′ West for variation of compass.

COURSES AND DISTANCES

From Oswego to Kingston —Due N. will take inside Real Ducks to Nine Mile Point on Simcoe Island, which has a fixed light, 56 miles.

N. by W., which is the best course, will take to the light of False Ducks, 40 miles, then N. E. ½ E. for Kingston Harbour, 30 miles.*

From Oswego to Big Sodus Bay, W. S. W. ½ S. 32 miles.
" Genesee River, W. by S. ½ S. 66 miles.
" Port Dalhousie, W. till abreast of Thirty Mile Creek, then S. S. W. 164 miles.
" Toronto, W. ½ N. 172 miles.
" Cobourg, W. N. W. 105 miles.
" Long Point, N. W. ½ W. 48 miles

LITTLE SODUS BAY.

About sixteen miles S. W. of Oswego is Little Sodus, an inlet or bay of considerable extent, and with depth of water sufficient for the largest class vessels that sail on the Lakes. Unfortunately, however, the water in the channel does not exceed an average of six feet, so that this otherwise secure basin is almost useless.

The entrance is between piers 250 feet apart, run out 1300 feet in the Lake, into fourteen feet water. The depth of water inside the bay ranges from twenty five feet to forty feet. There is no lighthouse.

BIG SODUS BAY.

Thirty-two miles W. S. W. ½ S. of Oswego, and thirty-six miles E. ½ N. of Genesee River is Big Sodus Bay, the most capacious and best harbour on the south shore of Lake Ontario.

It is entered from the Lake by a channel 470 feet wide, between piers which extend out into thirteen feet water.

* In the daytime, when steering for the False Ducks the high bushy land of South Bay Point will be seen before the lighthouse, but at night, the light will be visible first.

HARBOUR LIGHT

The pier on the W. side is 1,200 feet long, and has on its northern extremity a fixed bright beacon light; that on the E. is nearly 1,000 feet long

The average depth of water in mid-channel is ten feet, but immediately on entering the bay, the depth increases from twenty five to 40 feet, with good holding ground.

Should the wind blow heavily from the northward, round the wooded and bushy spit marked P. in the Chart, and anchor where indicated, here the vessel is protected from every wind or sea.

LIGHTHOUSE.

The lighthouse, which is 66 feet high, is built on a hill about three-quarters of a mile due W. of the beacon light on the pier end. It is a good revolving light easily seen ten or twelve miles in the Lake.

This picturesque and fine harbour runs south or into the land for about six miles, and in its widest part is upwards of three miles. It is but little frequented, being used principally for ship-building purposes; the timber, however, is nearly exhausted.

Several small islands are situated at the upper or S. end of the bay, and a village, where provisions can be obtained, is reached by following the crib work on the west side towards the lighthouse.

CURRENT

A strong current sets out of the bay about 2½ knots.

COURSES.

Brown's Point bears W. by N. 8 miles, and Nine-mile Point (west of Oswego) E. N. E. ¼ N. 23 miles.

NOTE.—This port cannot be mistaken at night, as it has the only revolving light between Port Dalhousie and Oswego.

GENESEE RIVER.

The port of Genesee, leading to the City of Rochester, is situated on the W. side of the emboucheur of the Genesee River.

It is protected from the violence of the Lake gales by piers about 2,000 feet long, running N. E. and S. W. into the Lake, and 400 feet apart. The river is narrow and tortuous, rendering it difficult to beat up, but the wharves, when once reached, afford every accommodation and shelter.

LIGHTS

The beacon light is on the end of the W. pier; the range or main lighthouse is 83 feet high, and built on the hill side; these must be brought in line to shew the direction of the west pier. Both these lights are bright and stationery.

In making this port from the westward, bring the pier light to bear S. S. E., and in running into the harbour, keep the pier light a little more than a vessel's length to the eastward of the lighthouse.

DANGER.

About twenty feet off the end of the W pier there are some piles and a sunken crib, which must be given a wide berth.

NOTE.—In Owen's and Herbert's Charts, a shoal having only eight feet of water is laid down, midway between Braddock's Point and the pier ends. This supposed danger has no existence, there being plenty of water everywhere to within a short distance of the shore.

COURSES AND DISTANCES

From Genesee River to Presqu' Isle, N. ½ W. 60 miles.
" " Mid-channel between Real and False Ducks, N. E. 75 m
" " Galloo Island Lighthouse, N. E ½ E. 87 miles
" " Oswego E. by N ½ N. 66 miles.
" " Braddock's Point, N. W. by W. 10 miles.
From Braddock's Point to Port Dalhousie, first W. by N. till opposite Oak Orchard Creek, then W. by S. 90 miles.
" " Toronto, W. by N ¼ W., 110 miles.
" " Cobourg, N. W. by N. 67 miles.

COMPASS.

When off Rochester, allow 1° for variation of compass.

OAK ORCHARD CREEK.

From the mouth of the Genesee River to the mouth of the Niagara River, there is not a port or harbour where a vessel drawing six feet or upwards can enter, the only boat harbour being Oak Orchard Creek, 35 miles W. of Rochester, and 52 miles E. of Niagara.

The entrance to this Creek is between two piers running N. and S. into 6 feet 6 in. water, and 160 feet wide. The west pier is 844 feet long, the east 734 feet; the basin or pond within has plenty of water and is well secured.

There is no lighthouse or wharf light.

NIAGARA RIVER.

The waters from all the Upper Lakes, after coming over the falls of Niagara, descend the river for about seven miles in a rapid and turbulent manner as far as Queenston, the stream there becomes wider and deeper, and admits of free navigation for vessels of any size, until it empties itself into Lake Ontario, at a point S. E. by S. of Toronto, 87 miles W. of the Genesee, and 12 miles to the eastward of Port Dalhousie.

At its mouth this river is about 1000 yards across, with from 20 to 40 feet water, and consequently it affords an easy entrance for shelter, and good anchorage during a storm.

The town of Niagara is a mile S. of Fort Mississauga, on its W. bank, where there are extensive wharves, and the village of Youngstown, which is nearly opposite Niagara on the east side has also good wharves and accommodation for shipping

LIGHTHOUSE

The lighthouse is 78 feet high, and placed on the top of Fort Niagara, which is built on the E side of the mouth of the river. It has a bright stationary light, which can be seen ten or twelve miles off.

On entering this river, keep near its centre, and bring Fort Niagara to bear S. E by E. When W. or W. by S. of the Fort, the shores become bold, and may be approached to within a short distance, especially on the E side

With a northerly wind meeting the current, there is a short chopping sea on the bar

DANGERS.

Extending into the Lake for about a mile N. W. of Fort Niagara is a shoal with only six feet of water on it, and under Fort Mississauga on the W bank there is another shoal, extending E. N. and N. W.

COURSES AND DISTANCES

From Niagara River to Port Dalhousie, W. by S. 12 miles
" " Burlington Canal, W. ½ N. 42 miles.
" " Oakville, W. N. W. 38 miles.
" " Toronto, N. W. by N. 35 miles.
" " Cobourg, N. E. 80 miles.
" " Long Point, E. N. E. 126 miles
" " Mid Channel between Real and False Ducks, E. N. E. ½ E.

PORT DALHOUSIE.

To sailing vessels, this is without doubt the most important Port on the Lake. Every vessel bound to or from the Upper Lakes is obliged to pass through the Welland Canal, and consequently to enter or leave this Port. It has the advantage of being easily made in any weather, and with any wind

LIGHTHOUSE

It is furnished with an excellent Lighthouse, built on the end of the east pier, containing a *revolving bright light*.

There are no shoals or dangers of any kind to be feared in approaching Port Dalhousie; the only caution requisite for a sailor, is to guard against standing inside

the range of the West Pier in working in, as between it and the remains of an old wharf there are two rocks and a shoal (all below water) on which he would put his vessel ashore The piers run N and S to the bend, thence to the lock N E and S W ; they are about 3,000 feet long, 200 feet apart, with an average depth of 12 feet water The basin or pond to the east of the steam-boat landing is too shoal to be of any service, and it reflects no little discredit upon the Commissioners for allowing so much valuable space to be lost, when at a comparatively small cost the capacity of this important port could be so greatly improved.

It has been told me as a fact, that between three and four miles N or N by W of the lighthouse, the compass dips, and for a short time becomes so disturbed as not to be relied upon I have not been able to verify this, but shall feel much obliged to any of the Captains frequenting this Port, communicating to me the result of their experience

COURSES AND DISTANCES.

From Port Dalhousie to Burlington Canal, W ¼ N 32 miles
" " Oakville, N W by N 32 miles.
" " Toronto, N by W 33 miles.
" " Whitby, N N E 55 miles
" " Long Point, E N E 136 miles
" " Mid channel between Real and False Ducks, E by ½ N 174 miles
" " Niagara River, E by N 12 miles
" " Devil's Nose, E by N ½ N

PORT OF HAMILTON & BURLINGTON CANAL.

The Port of Hamilton occupies the extreme Western end or head of Lake Ontario, it is separated from the Lake by a long low ridge of sand and gravel, resembling the Peninsula opposite Toronto This ridge stretches across from the northern to the Southern Shore in a S S E direction, converting that portion which is to the west into a large bay, called Burlington Bay, the entrance to which is by means of a Canal upwards of half a mile long, with an average width of 200 feet

Unlike most canals, or piers entering a harbour, the width is not uniform, the entrance from the Lake being its widest part, that into Burlington Bay its narrowest, the former is 225 feet wide, the latter 130; while at the ferry (or about its centre) it is 150 feet across During the year 1856 several alterations and repairs have been made Additional crib-work has been added to the eastern or Lake extremity of the South Pier, 300 feet in length, and considerably higher than the old work Instead of following the old line, or N E ½ E, the new part runs a more northerly course, or nearly N E by N, which has had the effect of making the entrance still more difficult than it was before, particularly when the wind is strong from the east or south

I have heard from persons residing on the spot, that it is next to impossible for sailing vessels to enter this canal during a gale from the E or S E without coming in contact with the end of the north pier, whereby the weaker of the two is likely to be seriously damaged; to obviate this catastrophe, however, several oak piles have been

driven into the bottom, which serve the purpose of a fender, and materially lessen the concussion that would otherwise take place.

The same *wise* arrangement has been made at the opening into the bay, except that the new work is added to the north pier, and the fenders to the south.

The old lighthouse which stood near the centre of the canal on the isthmus was destroyed by fire, and a new one has been erected on the east end of the south pier, with a stationary bright light, the old beacon light not being used.

The depth of water at the entrance from the Lake is variable, owing to a deposit taking place during an easterly or south-east blow; it is, however, never less than eleven feet.

Burlington Bay is upwards of five miles long, and about three miles wide, with from twenty to forty feet of water, except near its edges. There is good holding ground immediately inside the canal.

COURSES AND DISTANCES.

From the Canal to Toronto, N. E. 35 miles.
" " Whitby, N. E. ½ E. 70 miles.
" " Niagara River, E. ½ S. 42 miles.
" " Port Dalhousie, E. ¼ S. 32 miles.

OAKVILLE.

The Port of Oakville is 22 miles W. ½ S. of Toronto, and 14 miles N. E. by N. of Burlington Canal.

The piers, which are about 100 feet apart, run nearly N. and S. in the Lake, into twelve feet water. Within there is a basin, which if properly dredged would afford excellent shelter and accommodation to a large number of vessels. As it now exists, there is little more than a channel by which schooners of 200 tons are enabled to run up to the storehouse to load or unload.

LIGHTHOUSE.

The lighthouse is built on the East Pier; although forty feet high, it is so bad as to be scarcely visible six or seven miles in the Lake.

DANGERS.

Between this port and Port Credit there is a shoal, and numerous large boulders extend a considerable distance out from the shore, which should not be approached nearer than a mile.

COURSES AND DISTANCES.

From Oakville to Toronto, N. E. ½ E. 22 miles.
" Burlington Canal, S. W. by S. 14 miles.
" Port Dalhousie, S. E. by S. 32 miles.
" Niagara, E. N. E. 40 miles.
" Devil's Nose, E. ¼ S. 100 miles.
" Long Point, E. by N. 155 miles.

PORT CREDIT.

This port resembles Oakville in its construction, the piers being run out into deep water; the pond or basin within is large, and would accommodate a large fleet of schooners; the want of a dredge, however, renders it almost useless. This port is 12 miles S. W. by W. of Toronto, and 10 miles N. E. by N. of Oakville.

LIGHTHOUSE

The lighthouse is on the E. pier, low and bad, and not even lighted with that regularity which the safety of vessels trading to the port absolutely demands.

WELLINGTON SQUARE, AND NELSON OR BRONTE.

These small ports are situated between Oakville and the Burlington Canal. Their wharves run out into ten feet water, but from their exposed situation, except when the wind is off shore, they are rarely visited, except by the smallest class of coasting vessels.

PORT BRITAIN.

Having been favoured by J. Morrell, Esq., the President of the Port Britain Harbour Company, with a detailed account of the works now in progress, and having received a copy of the Report, drawn up by E. G. O'Brien, Esq., and Captain Weatherley, for the President and Directors of the Company, it affords me great pleasure to be able to lay before the public an authentic account of this excellent Harbour of Refuge.

I am also indebted to Messrs. Armstrong, Hime, and Beers, for an excellent Photographic Plan of the Harbour, of which I have availed myself.

Port Britain is situated in the centre of the Township of Hope, in the County of Durham, about sixty miles to the eastward of Toronto, four miles west of Port Hope, and nearly opposite the City of Rochester.

The great advantages to be derived from this Harbour, will arise from the splendid anchorage afforded by a blue clay bottom, entirely free of boulders, which is not to be attained to the eastward of this port, and which under any extremity will form a safe and secure refuge for all vessels navigating the Lake, protected as it is by the bluffs both to the eastern and western limits of the harbour, and will thus form a shelter for any vessel, in the almost impossible event of her inability to obtain the shelter of the piers or harbour itself.

The Inner Harbour will be formed by the natural basin, having an area of about 15 acres, with 12 feet depth of water; and the Outer Harbour will be formed by piers extending about 700 feet from the shore into the Lake, 300 feet apart at the entrance, with 14 feet depth of water, enclosing a surface of six acres, and thus available to vessels of any draught navigating the Lakes. There will also be lights on both pier ends.

The progress of these works has been so rapid, that the outer harbour will be accessible to vessels by the middle of June, and I am informed that a portion of the inner harbour will be completed so as to afford every accommodation to shipping for the fall trade.

It is not, however, the intention of the Company to complete the whole of the inner harbour immediately, their principal object being to ensure a secure Harbour of Refuge, extensive enough to meet the present exigencies of commerce, leaving the completion of the work, until such time as the rapidly increasing trade of the country may require.

Extracts from the Report of E. G. O'Brien, Esq., and Captain Weatherley.

"I first directed my attention to the anchoring ground, both outside and within the intended basin, good holding ground being essential to a harbour of refuge, and without which no place can be safely used as a trading port. This condition of a good harbour I found fulfilled more satisfactorily than I anticipated. * * *

* * * The bottom, both outside and within, as it will be when cleaned out to a depth of about fifteen feet, is a clay, and as far as I could ascertain, free from boulders, making the best holding ground possible. The construction of the harbour, as shewn by the plans, I consider preferable to any of the artificial ports which I have seen, being not only more safe but much larger than any other on that part of the coast of Lake Ontario. Opening wide east and west within, it allows the entrance between the piers extending south into the Lake to be made more direct and wider than would otherwise be safe; and again, the piers protecting this entrance, diverging from each other as they approach the inner harbour, give the wave rolling in, room to spread, and thereby lessen its force.

For all commercial purposes, it possesses the great advantage of ample room for wharves, stores, ship yards, or lumber yards, with the GRAND TRUNK RAILROAD running along its entire length, and accessible at all points.

The whole is surrounded by an amphitheatre of rising ground, at such a distance as to allow the freest circulation of air, and at the same time afford sufficient protection from westerly, northerly, and easterly winds."

EXTRACT

FROM

"AN ACT TO COMPEL VESSELS TO CARRY A LIGHT DURING THE NIGHT, AND TO MAKE SUNDRY PROVISIONS TO REGULATE THE NAVIGATION OF THE WATERS OF THIS PROVINCE"

---

14 & 15 Victoriæ, Chap 126

Passed, August, 1851

I. * * * * * * * And it is hereby enacted by the authority of the same, That all Steamboats, whether propelled wholly or in part by steam, while navigating the waters of Upper Canada, shall be provided during the night with lights, to be exhibited and affixed as follows:—

When under weigh—a white light on flag-staff aft, a bright white light on the foremast head, a green light on the starboard bow, a red light on the port bow, to be fitted with inboard screens

When at anchor, a common bright light at foremast head, as illustrated and explained in the Schedule A

That Schooners and other sailing vessels shall be provided during the night with lights, to be exhibited and affixed as follows:—

When sailing before the wind, a pale light,
When sailing on the starboard tack, a red light, } on the Pawl bit, or Knight head
When sailing on the larboard tack, a green light,
When at anchor, a pale light in the foremast rigging

Sailing Vessels running before the wind, or with the wind free, and making a Steamer's light dead a-head, shall pass on the starboard side, but if to avoid fouling their mainsail, or for any other good reason, they shall wish to pass on the larboard side, then shall show their green light, indicating that they are on the larboard tack, when the Steamer will pass under the Vessel's stern.

In case of two Sailing Vessels approaching one another on opposite tacks the vessel on the starboard tack shall keep the wind, and the one on the larboard tack shall keep away, always when tacking ship at night, shifting the light

A Vessel in distress shall show both red and green lights

2. And be it enacted, That any such Steamboat, Schooner, or Vessel as aforesaid shall be provided with a *Fog Horn* or a *Bell*, of a weight not less than twenty pounds, which it shall be the duty of the Master, or person commanding such Steamboat, Schooner or Vessel under the penalty in the seventh section of the said recited Act contained, to cause to be sounded or rung at regular intervals of not less than five minutes at a time, with an intermission of two minutes, during the time that any such steamboat, schooner, or other vessel as aforesaid shall be in a fog

* * * * * * * * * * *

11. And be it enacted, That if any damage to any person or property shall be sustained in consequence of the non observance of any of the provisions contained in this Act, the same shall in all Courts of Justice be deemed, in the absence of proof to the contrary, to have been caused by the wilful default of the Master or other person having charge of such Steamboat, Schooner, or other vessel as aforsaid, and the owner thereof in all civil proceedings, and such Master or other person in all proceedings, whether civil or criminal, shall be subject to the legal consequences of such default

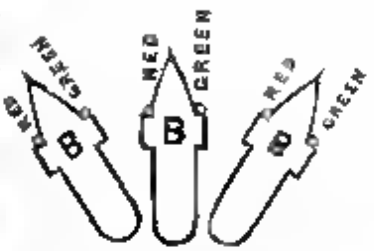
12 And be it enacted, That the penalties imposed by this Act may be sued for by information or action of debt, in the name of Her Majesty, in any Court of Record of competent jurisdiction, and one-half of such penalty shall be paid to the informer

SCHEDULE A.

The following Diagrams are intended to illustrate the working of the Plan prescribed by this Act.

FIRST SITUATION

In this situation, the Steamer A will only see the *red* light of the vessel B, in whichsoever of the three positions the latter may happen to be, because the *green* light will be hid from view A will be assured that the larboard side of B is towards him, and that the latter is therefore crossing the bows of A in *some direction to port* A will therefore (if so close as to fear collision) *port* his helm with confidence, and pass clear. On the other hand, the Vessel B, in either of the three positions, will see the *red*, *green*, and *mast-head* lights of A appear in a triangular form, by which the former will know that a Steamer is approaching *directly* towards him B will act accordingly



It is scarcely necessary to remark, that the *mast-head* light will be always visible in every situation till abaft the beam

SECOND SITUATION

Here A will see B's *green* light only, which will clearly indicate to the former that B is crossing to starboard Again, A's *three* lights being visible to B, will apprize the latter that a steamer is steering directly towards him.

THIRD SITUATION.

A and B will see each other's *red* light only, the screens preventing the *green* lights being seen Both vessels are evidently passing to port.

FOURTH SITUATION

Here a *green* light only will be visible to each, the screens preventing the *red* lights being seen. They are therefore passing to starboard

FIFTH SITUATION

This is a situation requiring caution! the *red* light in view to A, and *green* to B, will inform both that they are approaching each other in an oblique direction A should put his helm to *port*, according to the standing rule mentioned in the next situation

SIXTH SITUATION

Here the two coloured lights, visible to each, will indicate their direct approach towards each other In this situation it ought to be a *standing rule* that both should put their helms to *port*.

ROYAL HUMANE SOCIETY'S DIRECTIONS

FOR THE

RECOVERY OF THE APPARENTLY DROWNED.

CAUTIONS.

Avoid all rough usage—Never hold the body up by the feet—Nor roll the body on casks.—Nor rub the body with salt or spirits—Nor inject tobacco smoke or infusion of tobacco

METHODS OF TREATMENT

1 Support the body carefully, with the head and shoulders in a raised position

2 Strip the body, and rub it dry, then wrap it in hot blankets, and place it in a warm bed

3 Wipe and cleanse the mouth and nostrils

4 In order to restore the natural warmth of the body Move a heated covered warming pan over the back and spine—Put bladders or bottles of hot water or heated bricks to the pit of the stomach the arm pits, between the thighs, and to the soles of the feet.—Foment the body with hot flannels, but, if possible—Immerse the body in a warm bath as hot as the hand can bear without pain as this is preferable to the other means for restoring warmth—Rub the body briskly with the hand, do not, however, suspend the use of the other means at the same time

5 Apply sal volatile or hartshorn to the nostrils, if the power of swallowing be returned, small quantities of warm wine or weak brandy and water may be given, the patient should be kept in bed, and a disposition to sleep encouraged. Great care is requisite to maintain the restored vital actions and at the same time to prevent undue excitement The treatment is to be persevered in for three or four hours. It is an erroneous opinion, that persons are irrecoverable because life does not soon make its appearance

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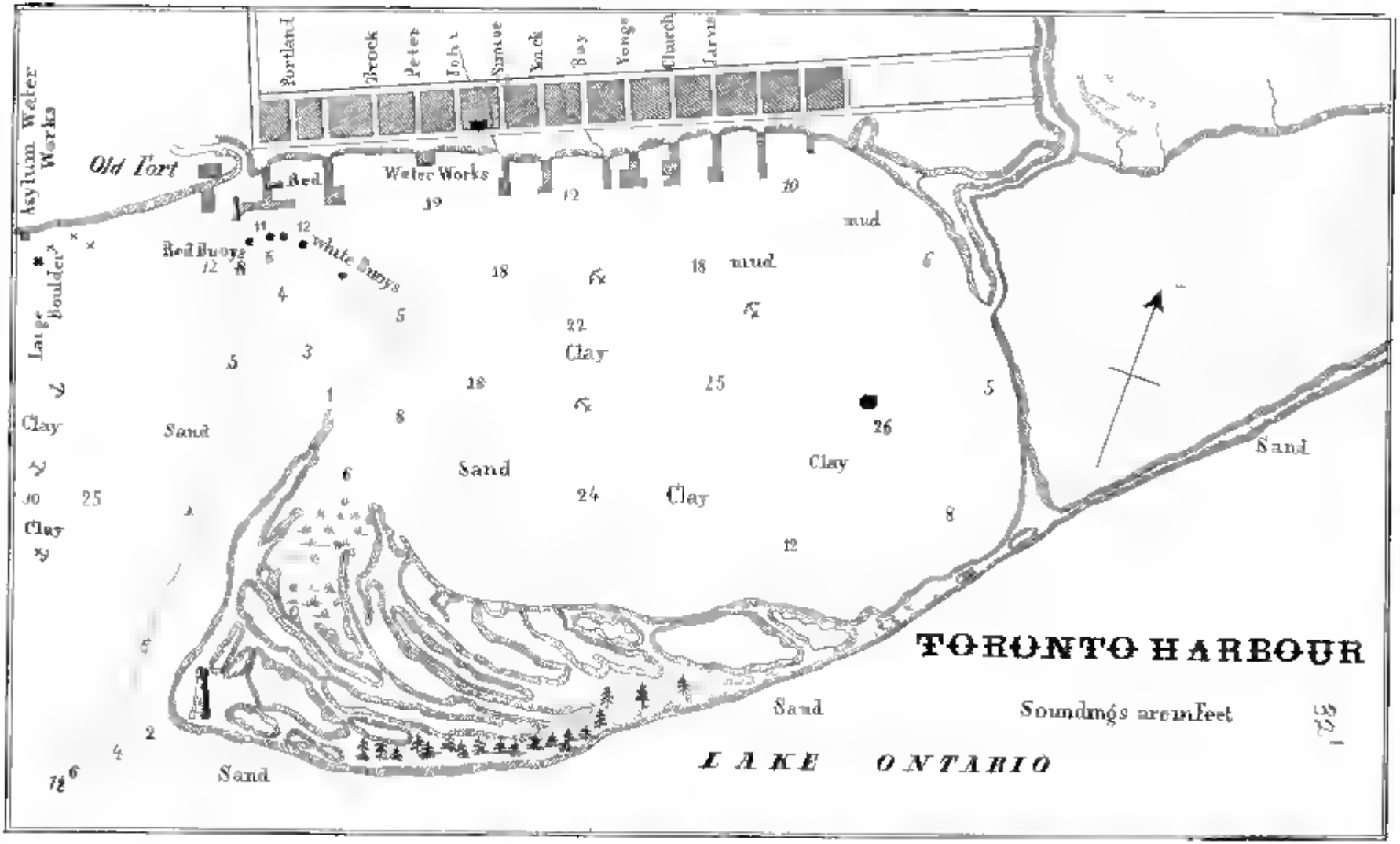
Portland
Brock
Peter
Samuel
Bay
Yonge
Church
Jarvis
Asylum Water Works
Old Fort
Red
Water Works
Red Buoys
White Buoys
Large Boulder
mud
Clay
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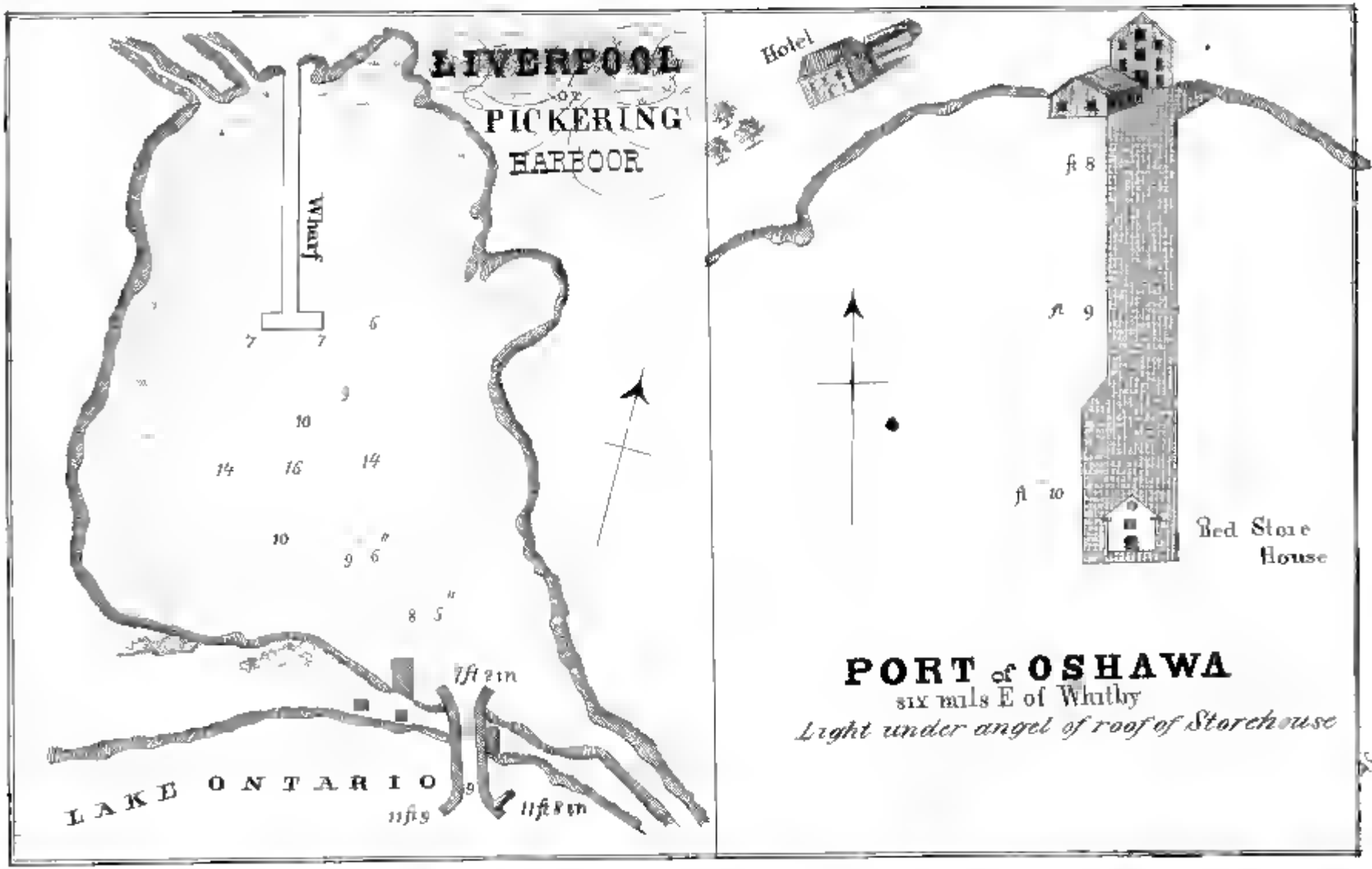
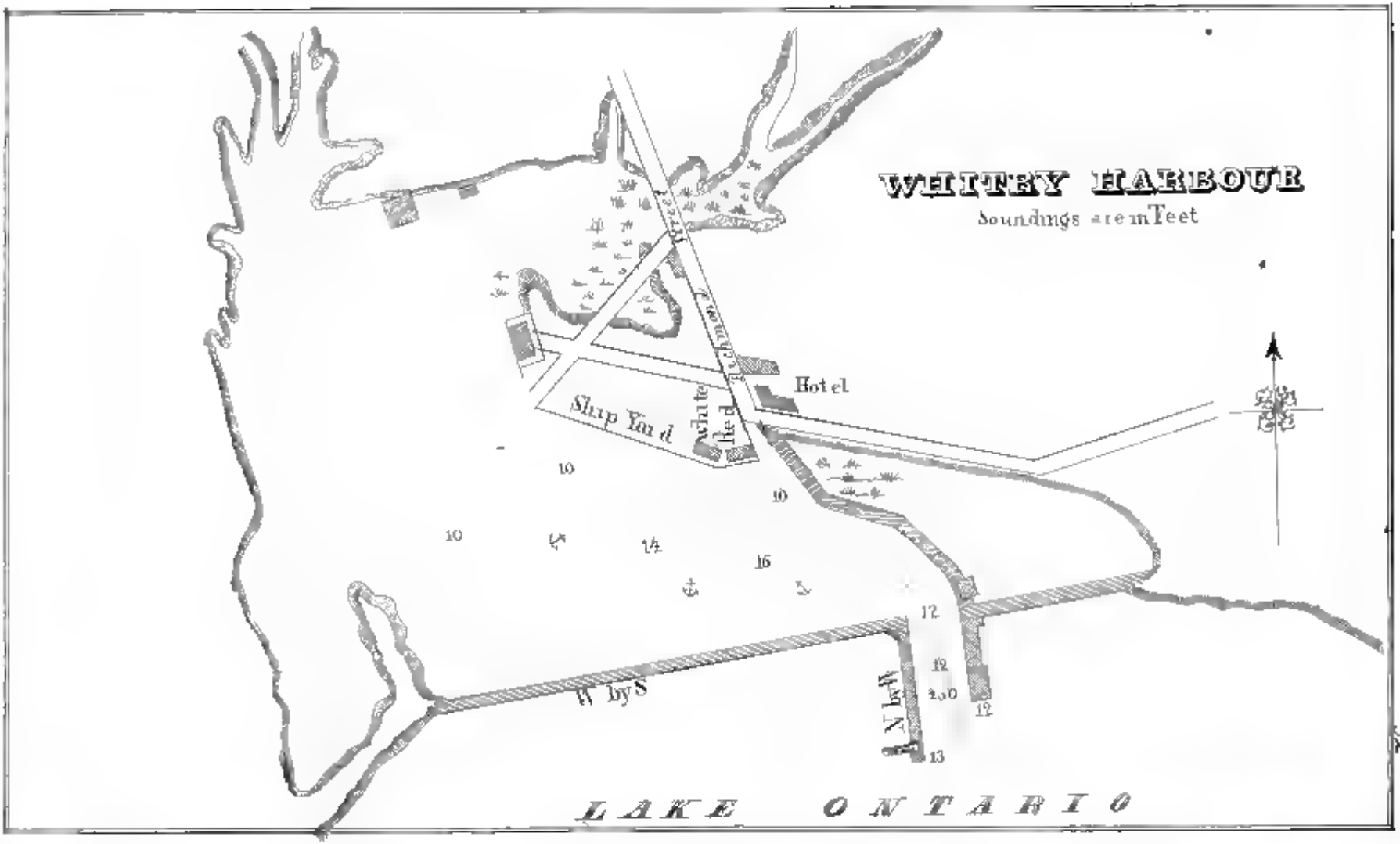
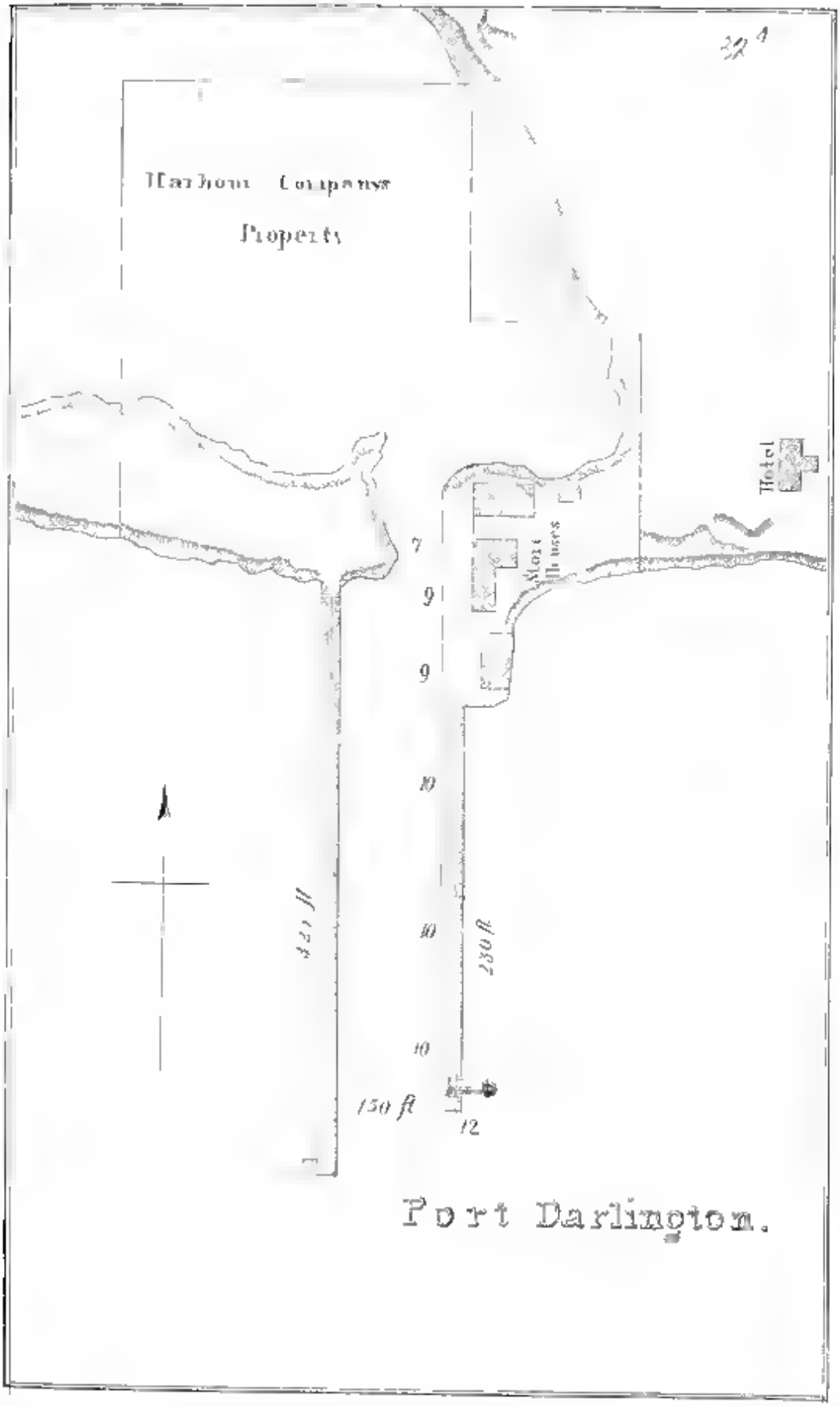
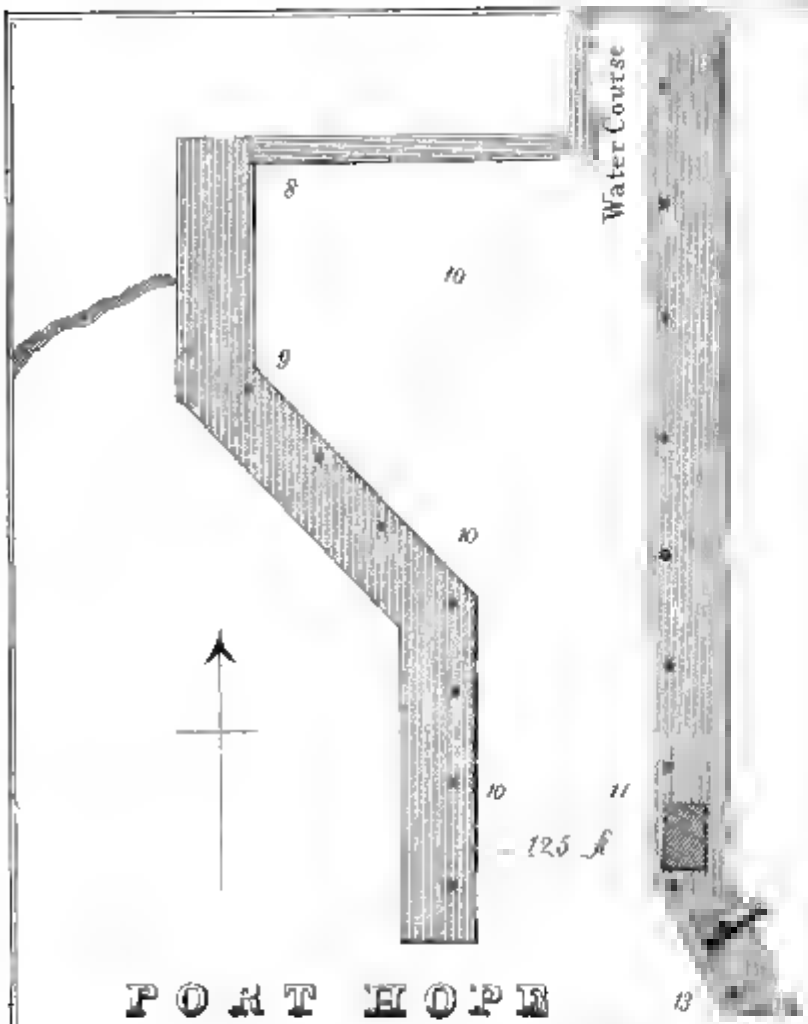
Sand
TORONTO HARBOUR
Soundings are in Feet
LAKE ONTARIO


LIVERPOOL
or
PICKERING
HARBOOR
Wharf
7
7
6
9
10
14
16
14
10
9
6
8
5
17ft 2in
LAKE ONTARIO
11ft 9
11ft 8in
Hotel
ft 8
ft 9
ft 10
Red Store
House
PORT of OSHAWA
six mils E of Whitby
Light under angel of roof of Storehouse

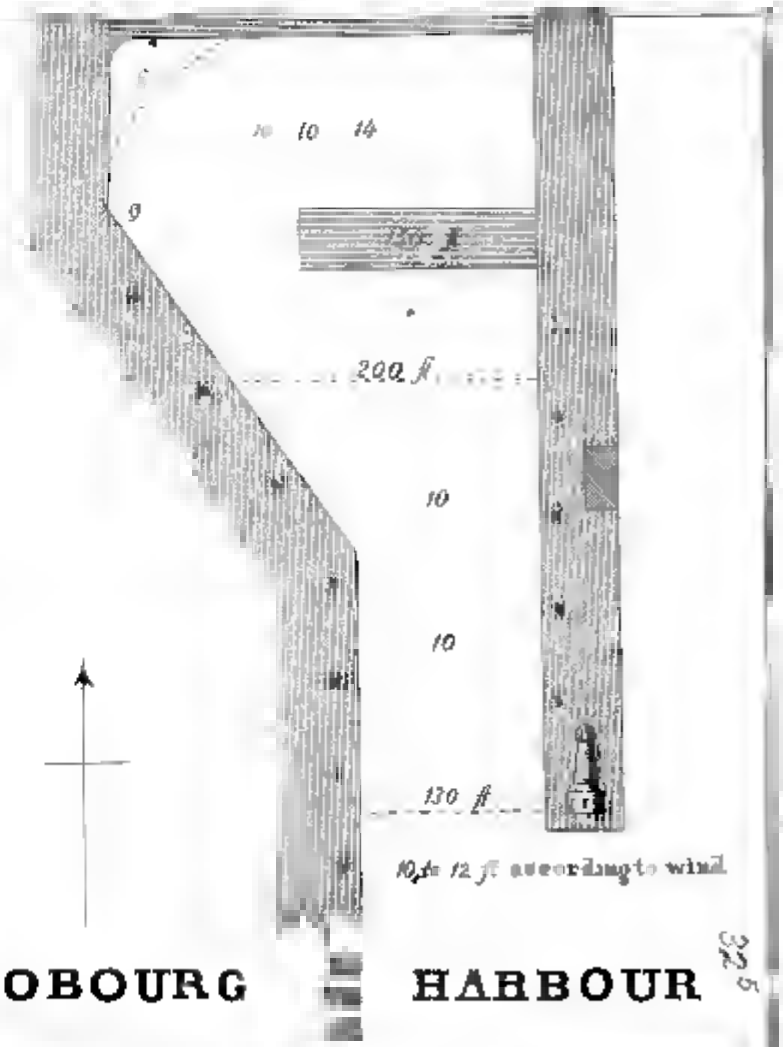

WHITBY HARBOUR
Soundings are in Feet
Hotel
Ship Yard
White Head
Lighthouse
10
10
10
14
16
12
12
12
13
W by S
N by W
LAKE ONTARIO



Port Darlington.

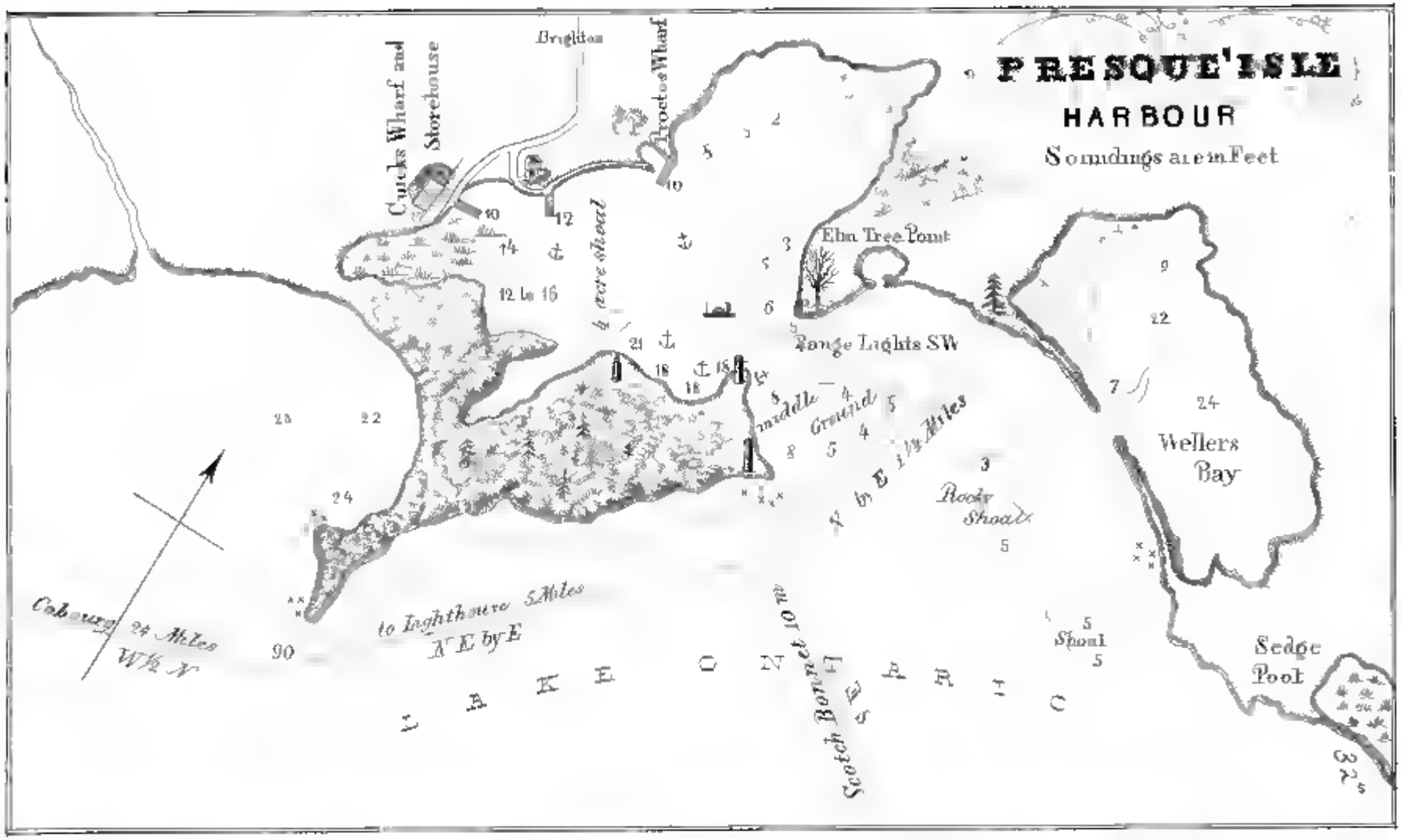


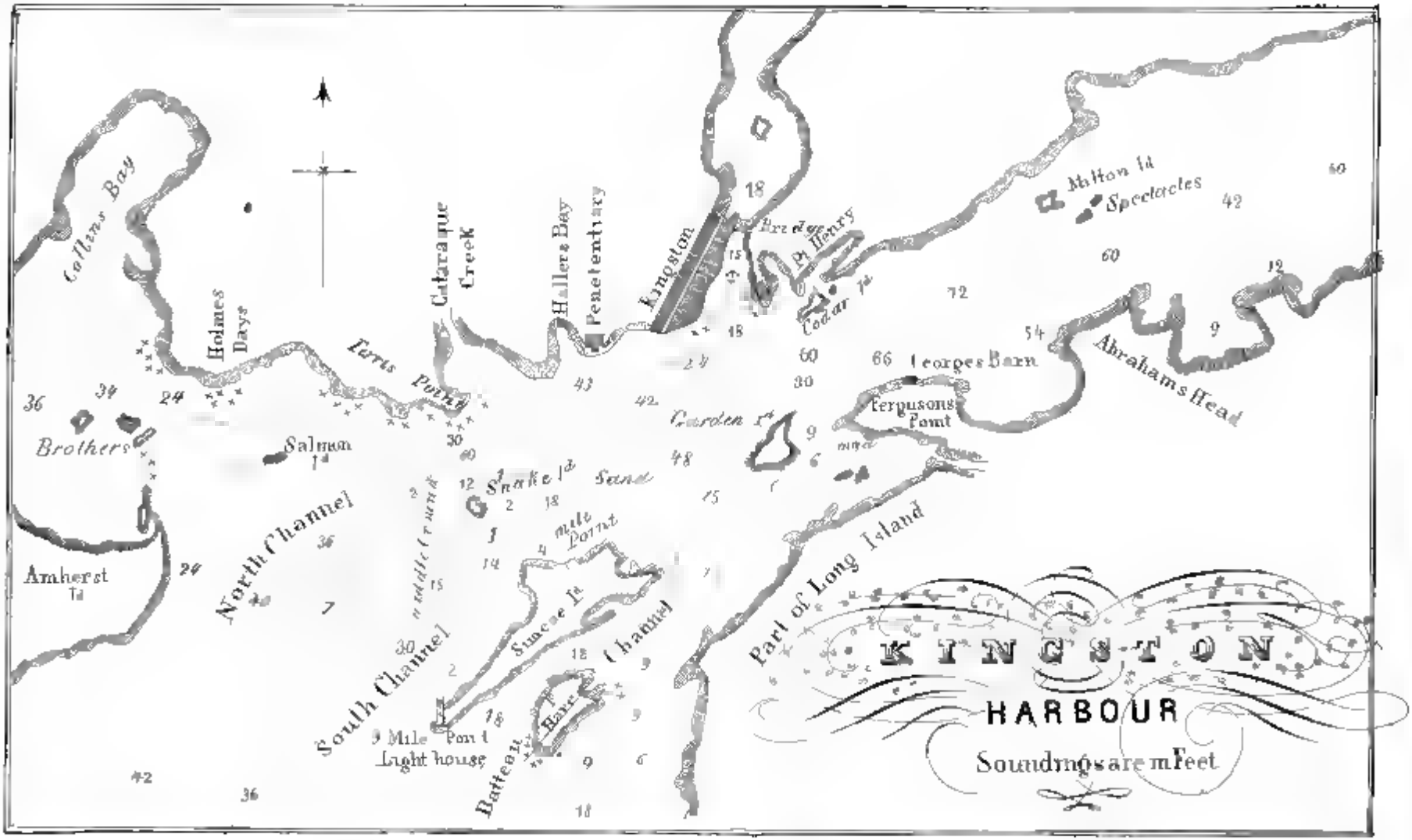
PORT HOPE

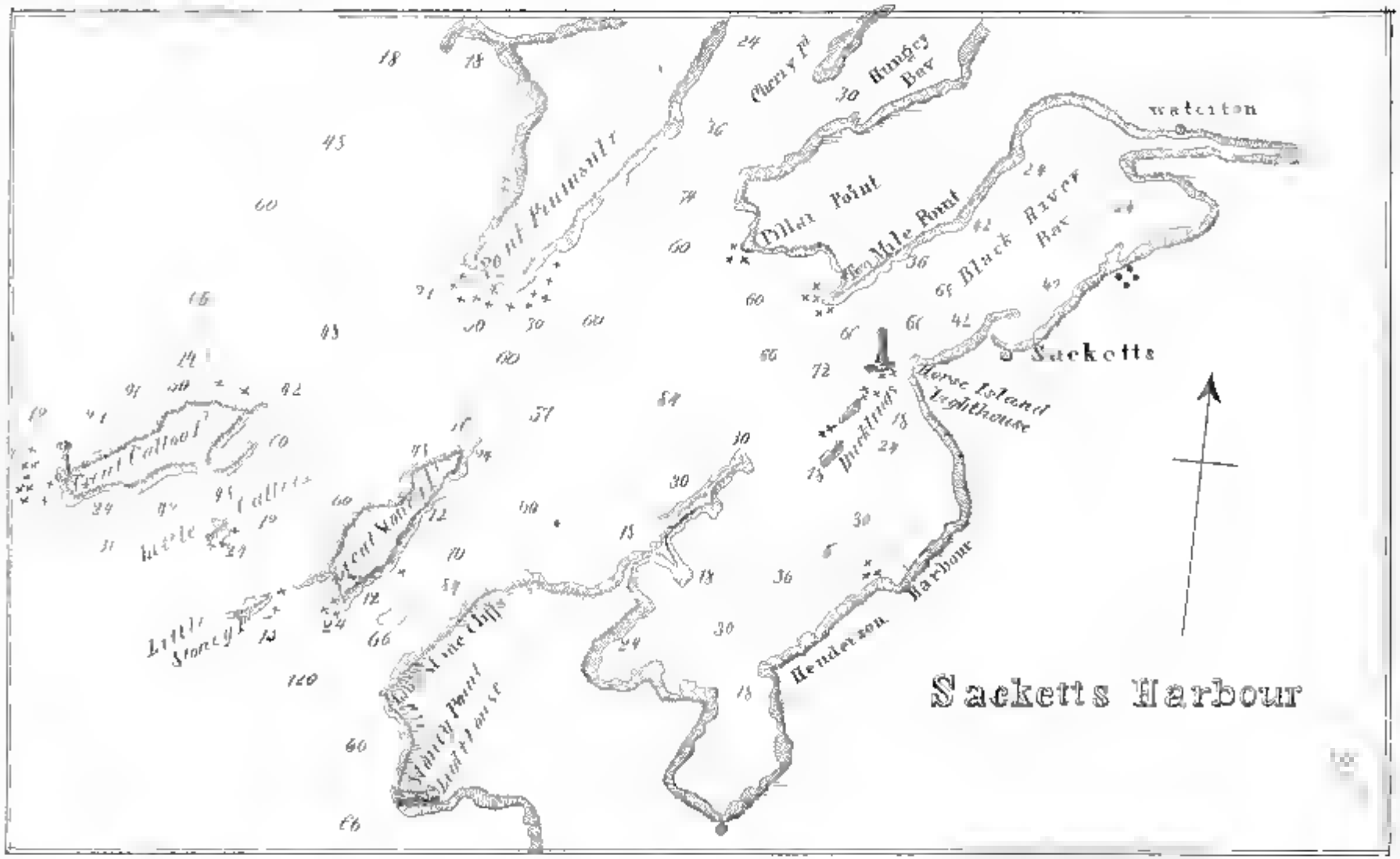


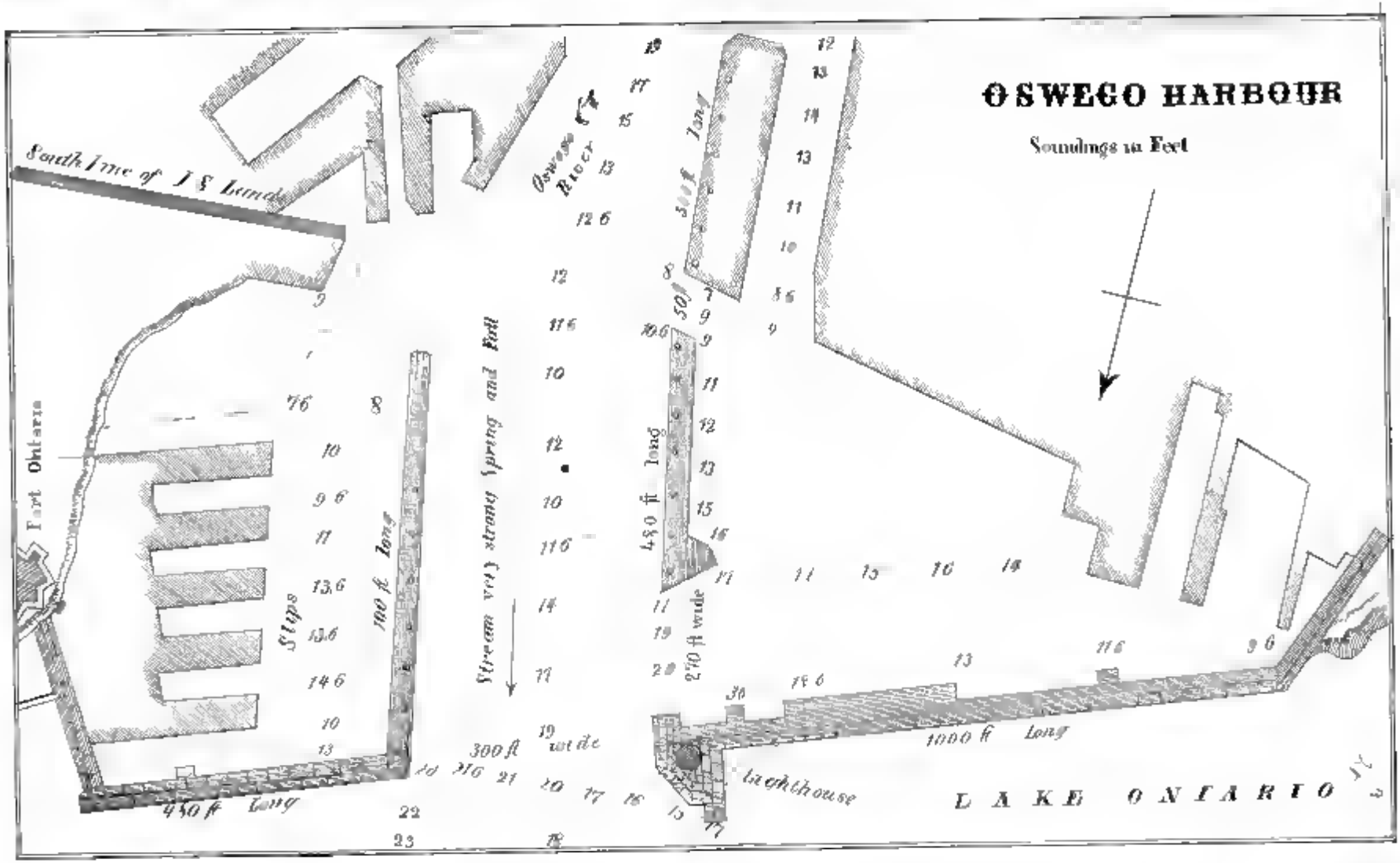
COBOURG HARBOUR

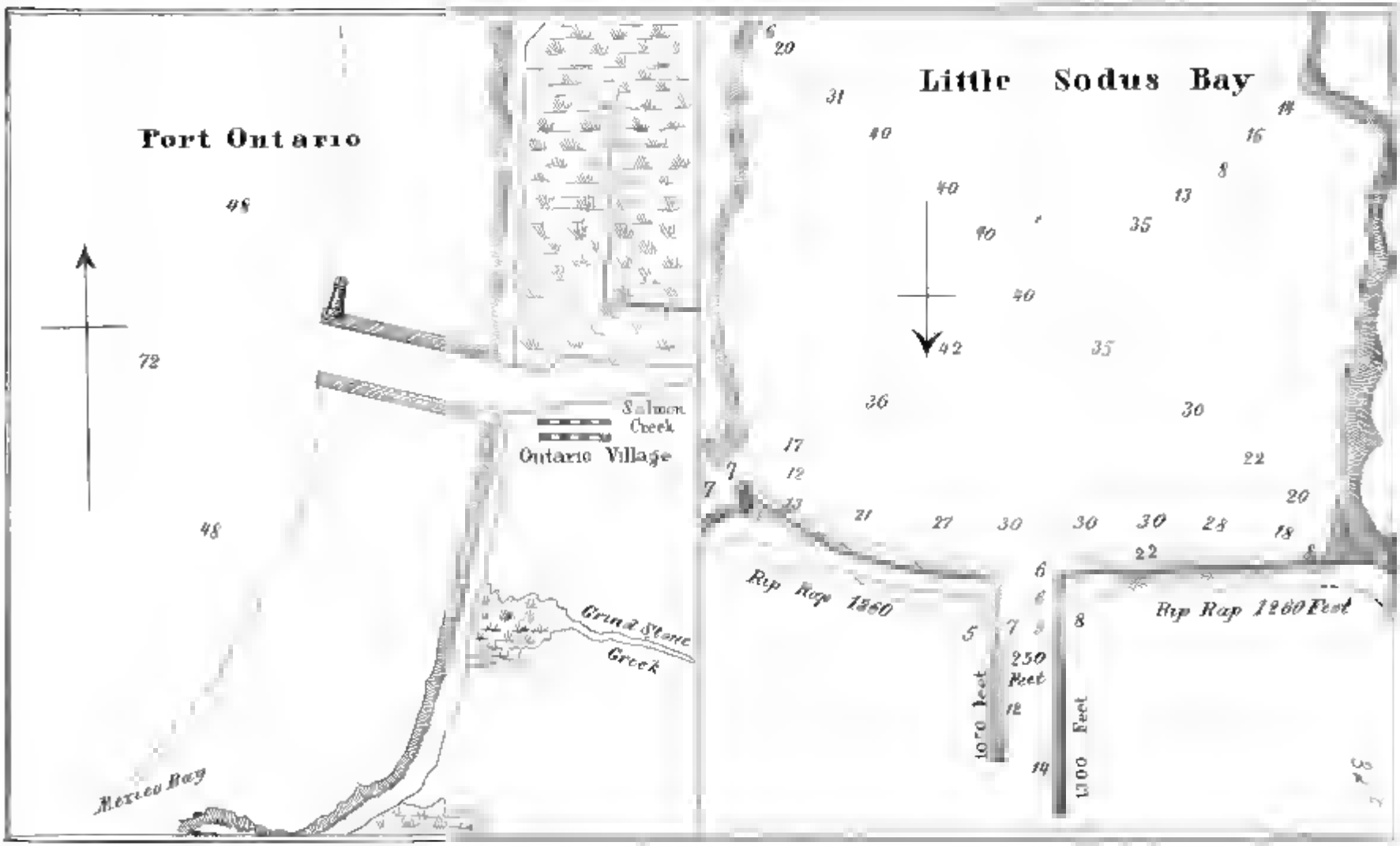
35

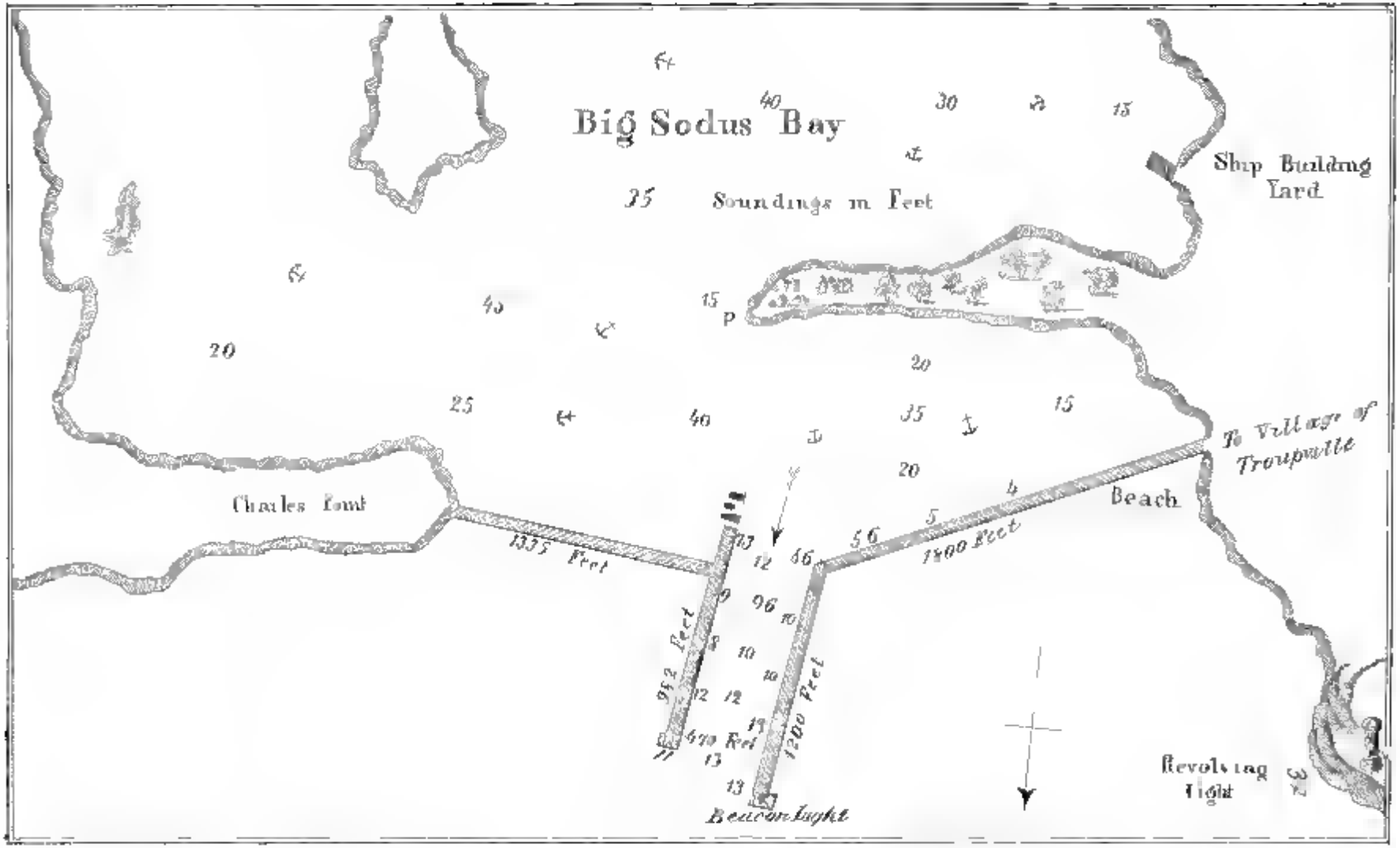

PRESQUE'ISLE
HARBOUR
Soundings are in Feet
Brighton
Crucks Wharf and Storehouse
Proctors Wharf
Elm Tree Point
Range Lights SW
Middle Ground
Rocky Shoals
Wellers Bay
Sedge Pool
Shoal
Scotch Bonnet 10m
Cobourg 24 Miles W½N
to Lighthouse 5 Miles N E by E
LAKE ONTARIO

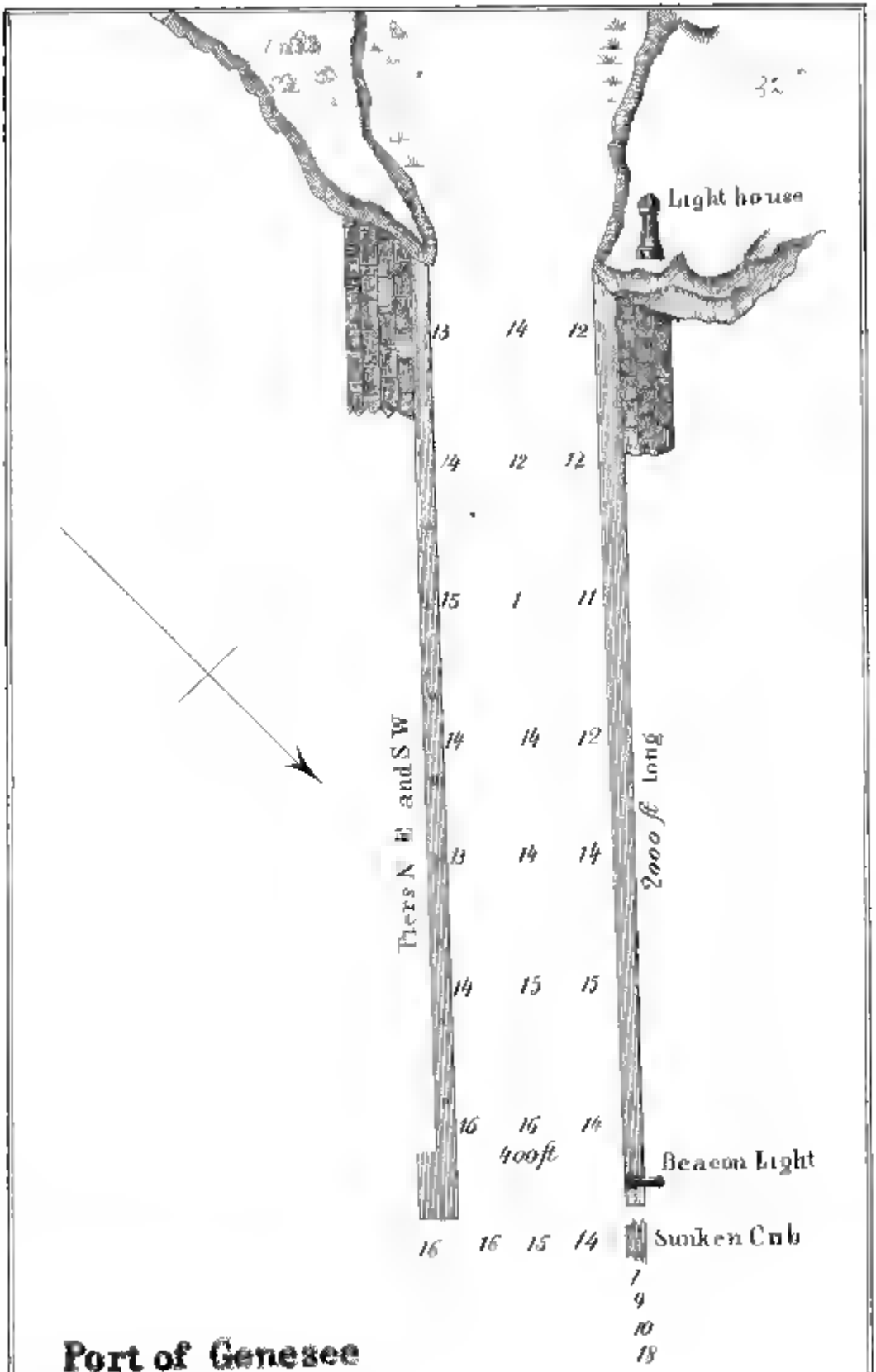

Collins Bay
Holmes Days
Terris Point
Cataraqui Creek
Hallers Bay
Penetentiary
Kingston
Pt Henry
Cedar Id
Mutton Id
Spectacles
George Barn
Abrahams Head
Ferguson Point
Garden Id
Brothers
Salmon Id
Snake Id
Sand
North Channel
Middle Ground
Amherst Id
Stone Id
South Channel
Mile Point
Light house
Battery
Point
Bar
Part of Long Island
KINGSTON
HARBOUR
Soundings are in Feet


Point Peninsula
Cherry Pt
Hungry Bay
watertown
Dillon Point
Sea Mile Point
Black River Bay
Sacketts
Horse Island Lighthouse
Buckhorn
Great Carlton I
Little Carlton I
Great Stony I
Little Stony I
Stone Chips
Stony Point Lighthouse
Henderson Harbour
Sacketts Harbour

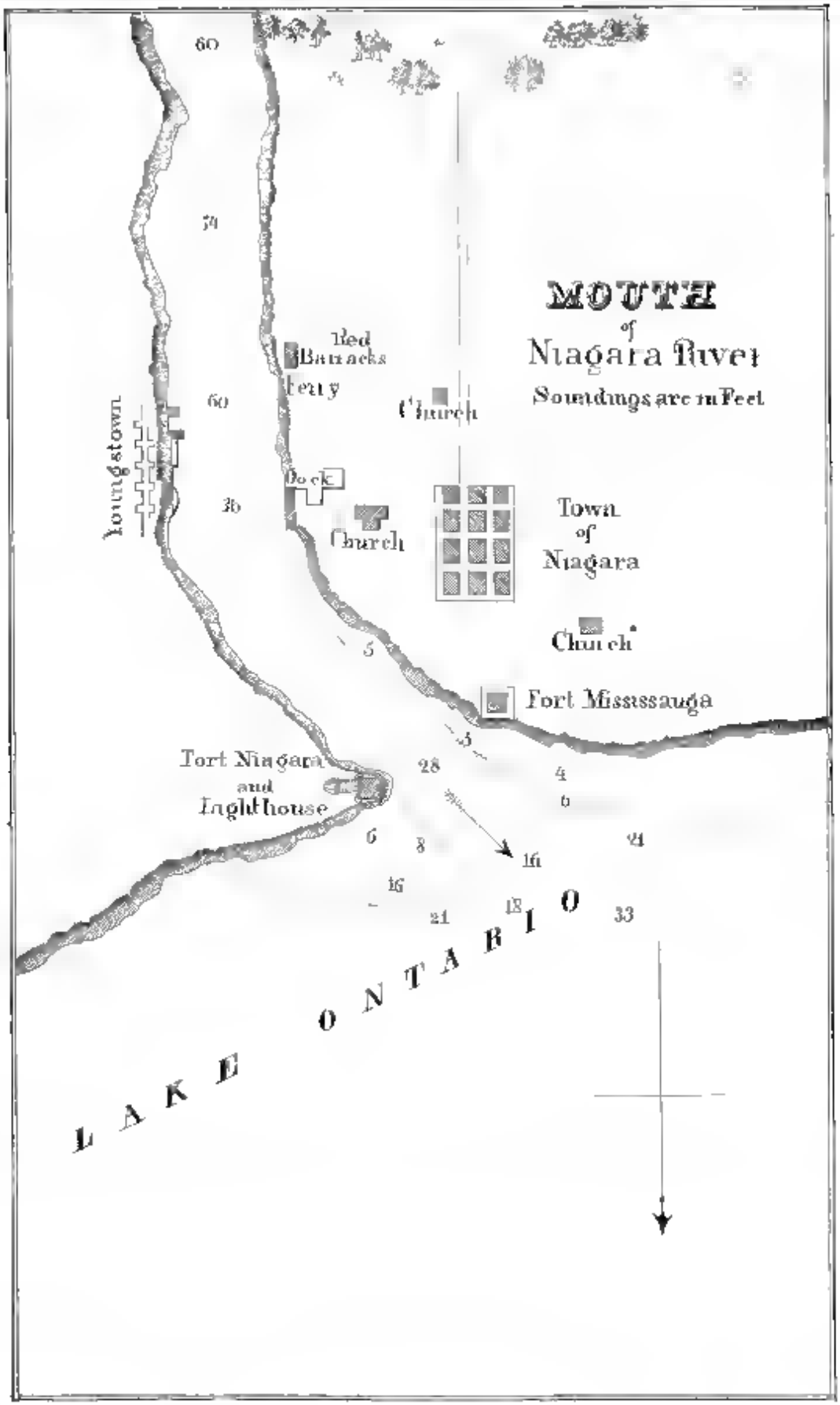

OSWEGO HARBOUR
Soundings in Feet
South Line of J S Lands
Fort Ontario
Steps
100 ft Long
Stream very strong Spring and Fall
300 ft wide
450 ft Long
480 ft Long
270 ft wide
Lighthouse
1000 ft Long
LAKE ONTARIO

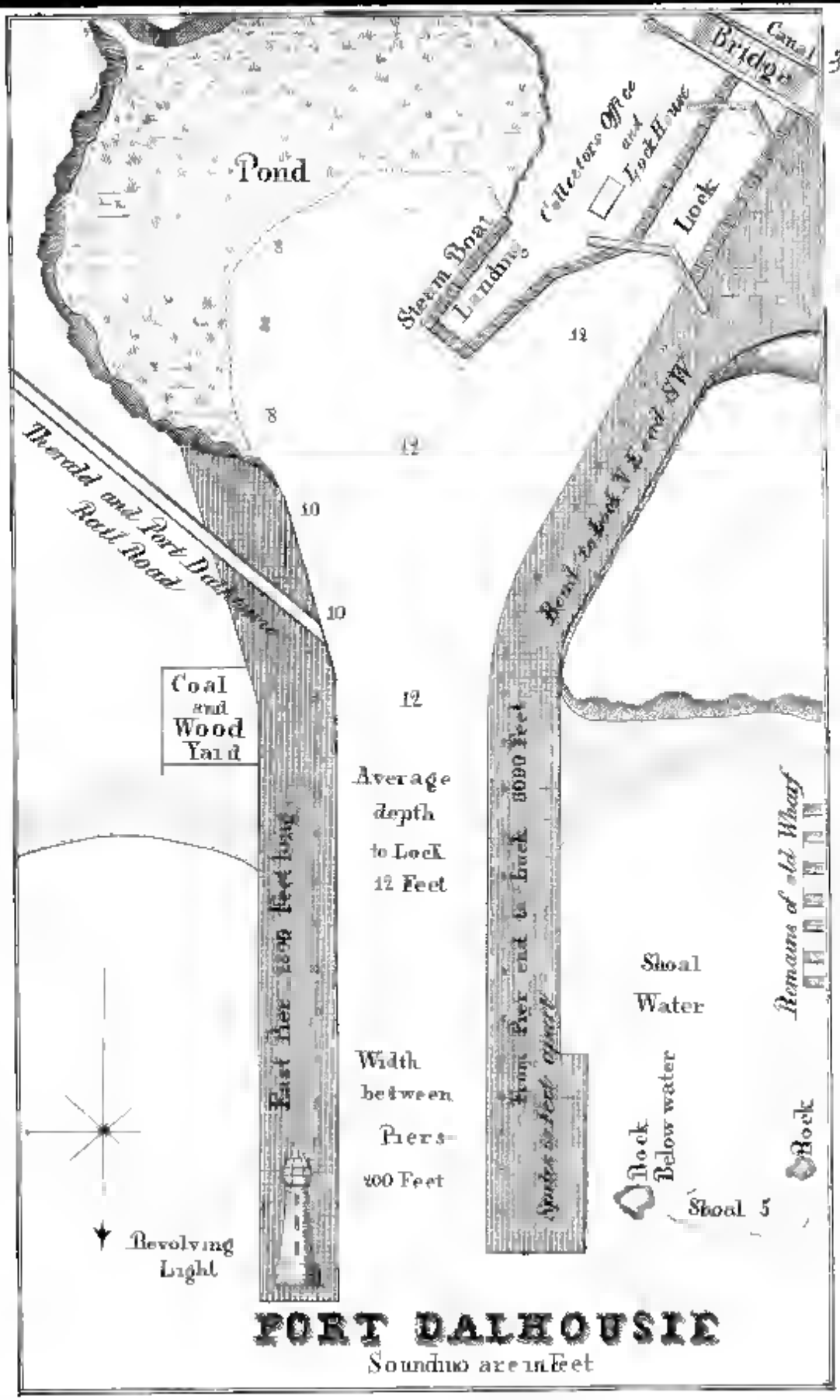

Port Ontario
Little Sodus Bay
Salmon Creek
Ontario Village
Grand Stone Creek
Mexico Bay
Rip Rap 1260
Rip Rap 1260 Feet
1070 Feet
250 Feet
1300 Feet

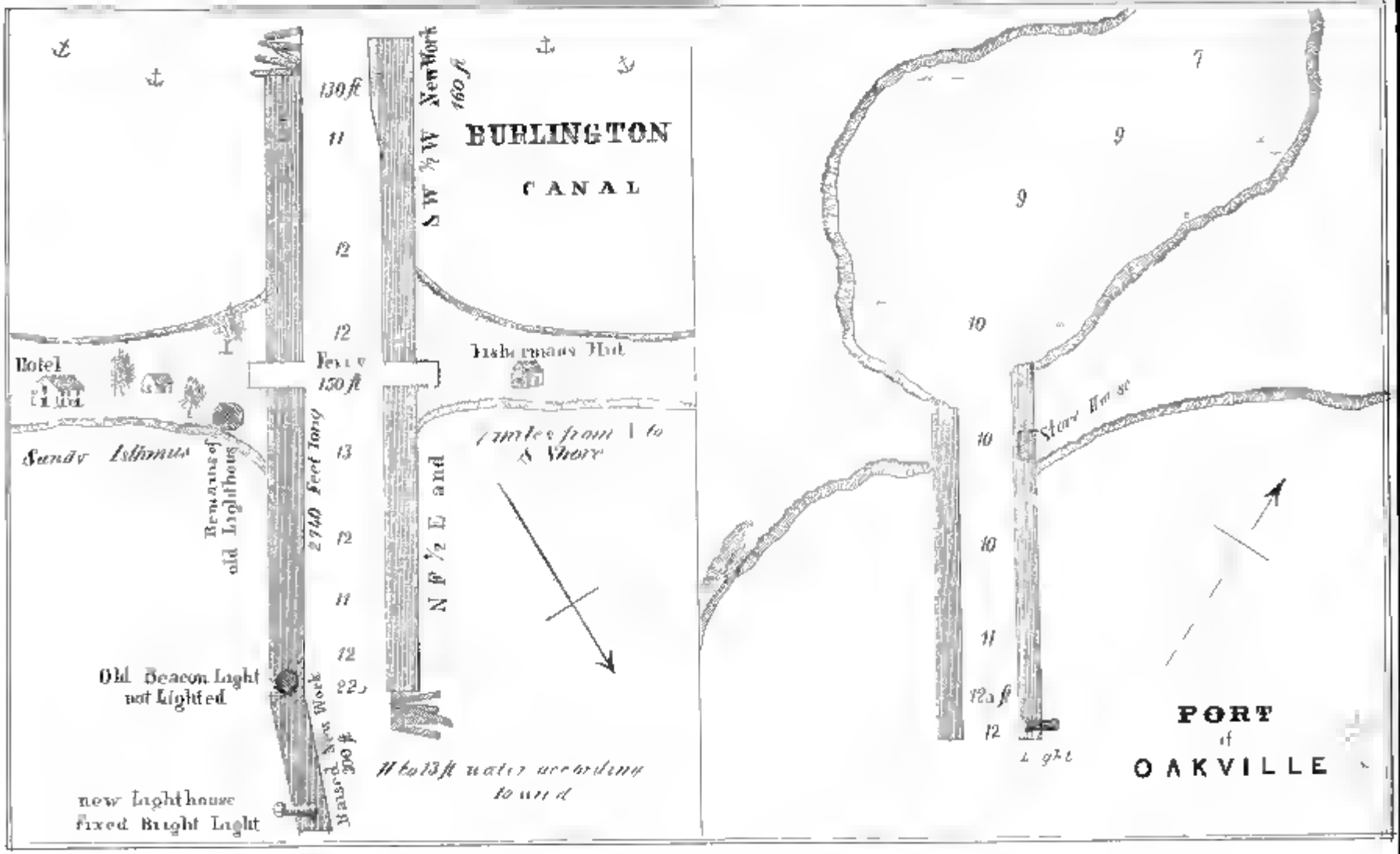

Big Sodus Bay
35 Soundings in Feet
Ship Building Yard
Charles Point
1335 Feet
952 Feet
470 Feet
1200 Feet
1400 Feet
Beacon Light
Beach
To Village of Troupville
Revolving Light

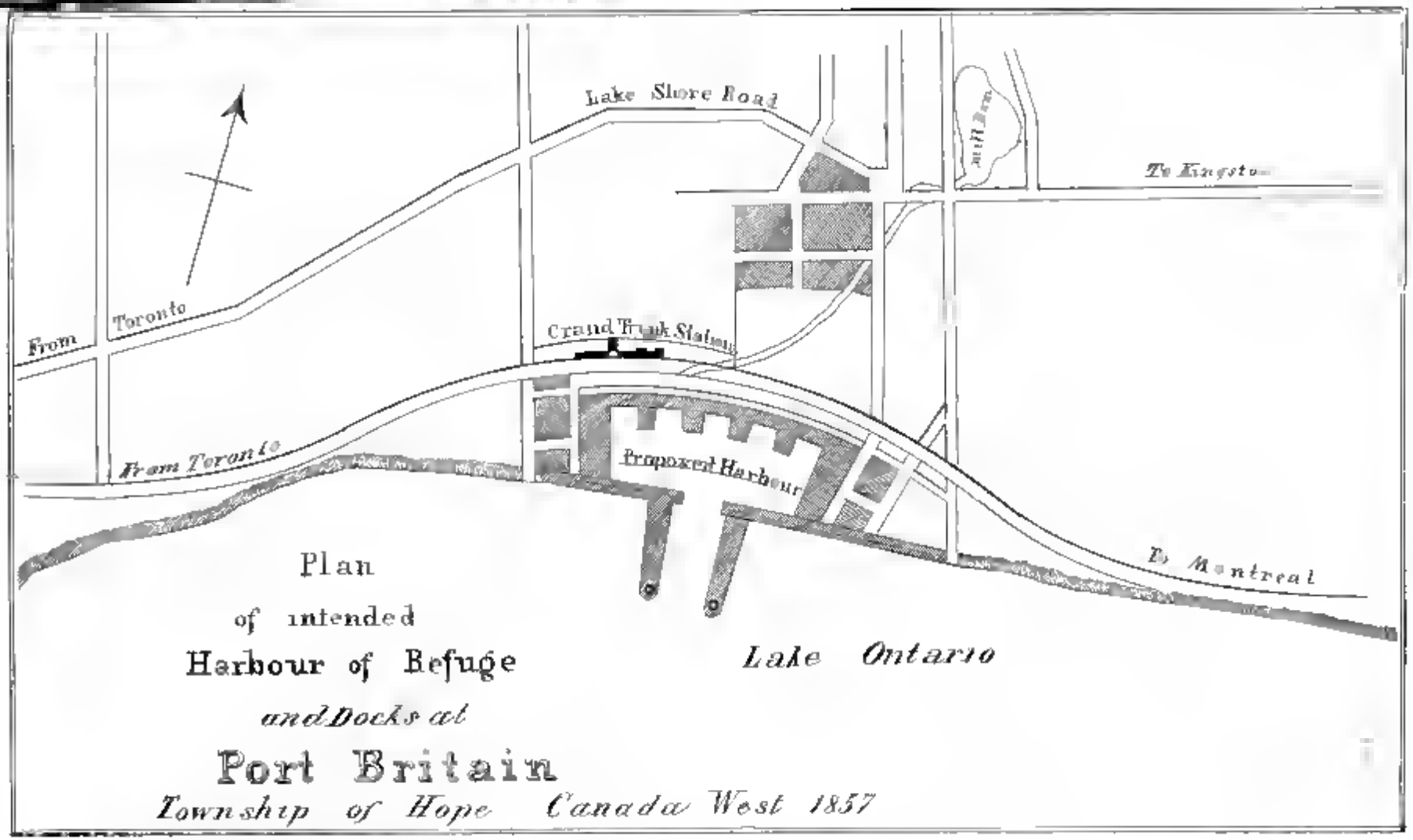


Port of Genesee


MOUTH
of
Niagara River
Soundings are in Feet
Red
Barracks
Ferry
Church
Youngstown
Dock
Church
Town
of
Niagara
Church
Fort Mississauga
Fort Niagara
and
Lighthouse
LAKE ONTARIO
60
70
60
36
5
5
28
4
6
6
8
16
21
16
21
18
33


Canal
Bridge
32° 14'
Pond
Steam Boat Landing
Collectors Office and Lock House
Lock
12
8
12
10
10
Arnold and Port Dalhousie Rail Road
Coal and Wood Yard
12
Average depth to Lock 12 Feet
East Pier 1890 Feet long
From Pier end to Lock 3000 Feet
Remains of old Wharf
Shoal Water
Width between Piers 200 Feet
Rock Below water
Rock
Shoal 5
Revolving Light
PORT DALHOUSIE
Soundings are in Feet


BURLINGTON
CANAL
PORT
of
OAKVILLE
Hotel
Sandy Isthmus
Remains of old Lighthouse
Old Beacon Light not Lighted
new Lighthouse
Fixed Bright Light
Fishermans Hut
Ferry
150 ft
2740 Feet long
Hazard New Work
300 ft
New Work
160 ft
SW ¾ W
N E ½ E and
Soundings from 1 to 4 Fathoms
11 to 13 ft water according to mark
Light House
130 ft
11
12
12
13
12
11
12
22
9
9
7
10
10
10
11
12 ft
12


Lake Shore Road
To Kingston
From Toronto
Grand Trunk Station
From Toronto
Proposed Harbour
To Montreal
Plan
of intended
Harbour of Refuge
and Docks at
Port Britain
Township of Hope Canada West 1857
Lake Ontario

HARBOURS AND PORTS

LAKE ONTARIO

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

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Archive

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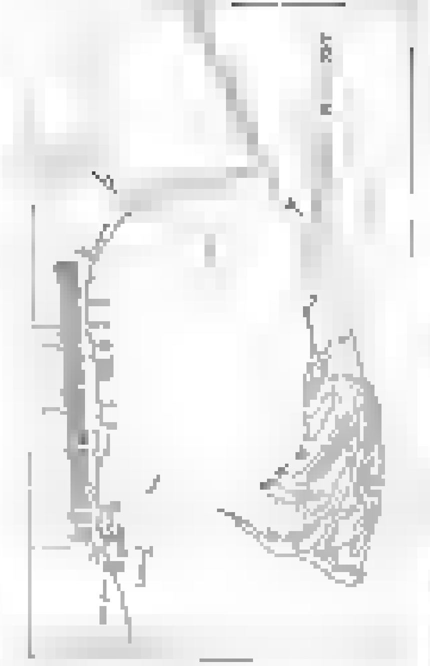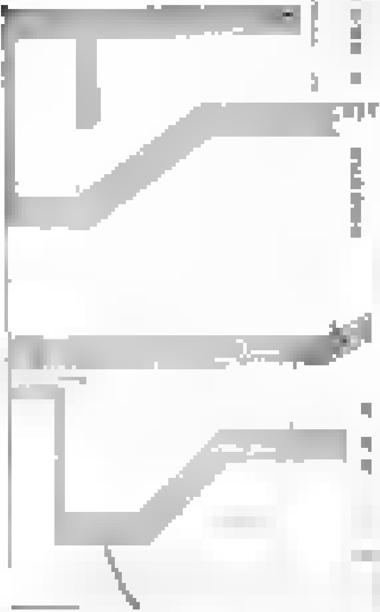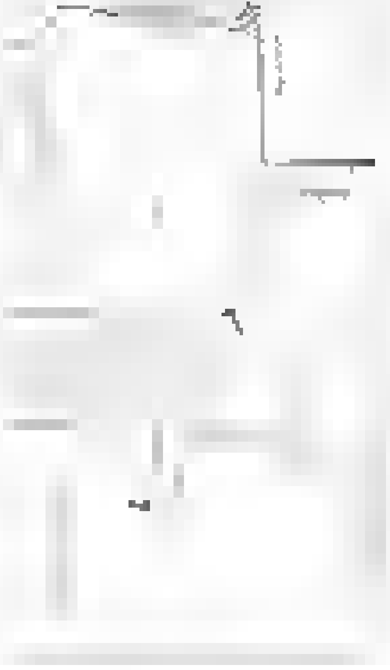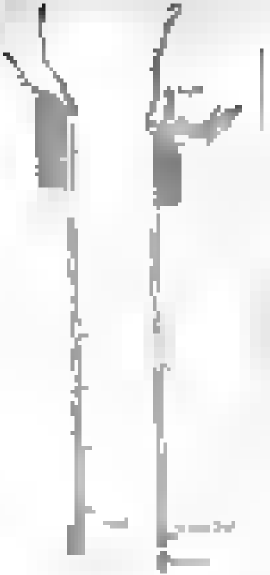
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